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ABSTRACT

This eight-day unit is designed for use in social studies and science classes at the secondary and community college levels as a general introduction to the technical, organizational, legal, and ethical issues related to war. While this unit is not meant to serve as a complete history of war and warfare, it supplements the discussion of war by familiarizing students with important analytical perspectives. Students work in groups to discuss the characteristics of war, tactics, weapons, and society in the Stone Age, ancient Greece, the early Middle Ages, the Hundred Years War, the Mongol empire, World War I, and World War II. They then examine the changes in the technology of warfare, focusing particularly on technical developments such as the speed, accuracy, and yield of weapons. Next students study and discuss some of the rules of war, codes of conduct, and other attempts to limit or control the behavior of nations and individuals at war. Finally, many of the legal, organizational, and ethical issues relating to war are raised by the assault on the village of Mi Lai during the Vietnam war. The lessons make ample use of maps, overhead transparencies, and a variety of handouts. Five appendices provide: (1) a list of related activities; (2) connections to textbooks; (3) connections to California's Framework and Model Curricular Standards; (4) a bibliography; and (5) a statement of educational philosophy. (DB)

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STONE AGE The men outline their bodies in gray clay and soot, add
ellow . . . The purpose is to try to frighten the enemy. The purpo
n the enemy. Weapons allow humans to kill people without having to
Weapons allow humans to . . . frighten the enemy. Name the t
Name the two parts of a weapon. frighten the enemy. GREECE:
A rank of marching soldiers was called a *phalanx* . . . the clat
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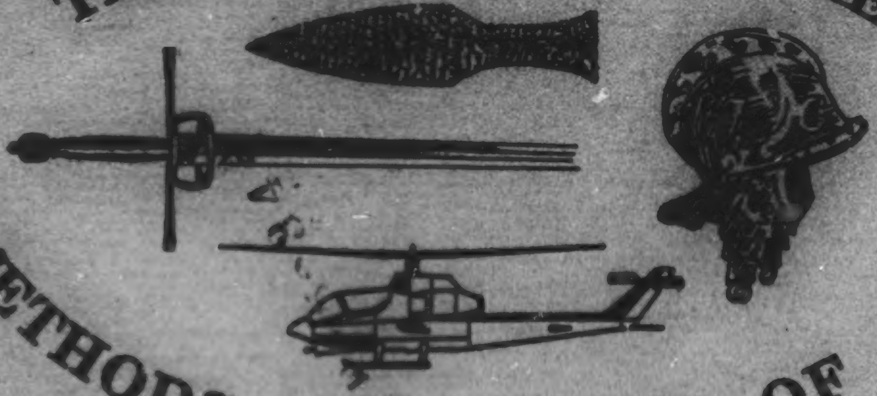
THE EVOLUTION OF THE METHODS AND RULES OF WAR



and were celebrated for their skill with the *crossbow*.
arrow after arrow. In battle, the knight and the peas
eir social classes alone. As early as 1339, soldiers in
tive version of the shotgun, called a "ribauldequin,"
her which was designed to fire several bullets • • •
offensive alone is suited to the temperament of the Fre
eing ignored it was essential that we should attack." So
end under constant artillery shelling, unable
AR II Global, *mechanized war* depends upon m
d the strength of the nation's commitment. . .
roducing one ship a day and one aircraft every
ernational law. Violations of these rules are
to be tried and punished like any other criminal. Following the
f Nazi concentration camps, the *Nuremberg trials* added new
AR IS A FIGHT WITH NO RESTRAINT. War is a fight with only prud
E FOUGHT WITHIN MORAL RESTRAINTS. War is always wrong. WAR
MY LAI "But," Calley said, "I would like you to consider a thous
ng to be lost in Southeast Asia, the thousands more to be impris
United States, but in North Vietnam and...all over the world...W
g massacred and mauled by an enemy I couldn't see, I cou

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SPICE

Littlefield Center, Room 14, 300 Lasuen Street
Stanford University
Stanford, California 94305-5013
☎ (415) 723-1114

Background

The Stanford Program on International and Cross-Cultural Education (SPICE) represents a long-term effort by Stanford University to improve international and cross-cultural education in elementary and secondary schools. The program traces its origins to 1973 with the initiation of the Bay Area China Education Project, an effort to upgrade teaching about the People's Republic of China. Subsequently, parallel projects on Japan, Africa, Latin America, Western Europe, and the Soviet Union and Eastern Europe were established, and together with the China Project, became the nucleus of SPICE. SPICE also offers services in the fields of geography and foreign language.

In 1979, SPICE joined with two other international resource organizations–The World Affairs Council of Northern California and Global Educators–to form the Bay Area Global Education Program (BAGEP), an international studies resource consortium serving K-12 schools and districts in the San Francisco area. In 1986, Stanford University, in cooperation with the World Affairs Council and Global Educators, was selected to manage the California International Studies Project (CISP), a legislatively-based (AB 2543) statewide network of international resource centers for which BAGEP serves as a model. SPICE is the curriculum development and materials resource arm of CISP.

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THE EVOLUTION OF THE METHODS AND RULES OF WAR

Topic #3 in a Series
of International Security and Conflict Curricula
For Grades 7-12 and Community College

Developed by Robin Riddle
with the assistance of Joline Bettendorf, and the
International Security and Arms Control (ISAAC) Project Staff,
Stanford Program on International and
Cross-Cultural Education (SPICE)

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The first draft of this unit was field-tested by several ISAAC Project teacher associates. Also, during a curriculum revision workshop, significant contributions were made by ISAAC Project teacher associates Joline Bettendorf and Emmett O'Neill (Santa Rosa High School, Santa Rosa, CA); Ms. Schwan; Dave Bernstein, Stanford University's Center for International Security and Arms Control (Stanford, CA); and Steve Fetter, Universty of Maryland (College Park, MD).

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The authors and the International Security and Arms Control Project are responsible for the final quality of this curriculum unit.

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Credits

Cover designed and produced by Susan Equitz, Adrian Chan, and Eric Jones for the International Security and Arms Control Project.

The *Profile Sheet* (Handout #1), *The Stone Age* (Handout #2), *The Age of Metals* (Handout #3), *The Mongols* (Handout #5), and *World War II: Global Warfare* (Handout #8), and *Key Terms* (Handout #9) were written by Joline Bettendorf for the International Security and Arms Control Project.

The Early Middle Ages (Handout #4) was written by Robin Riddle with the assistance of Eric Jones for the International Security and Arms Control Project.

The Hundred Years War: The Battle of Crécy (Handout #6) was written by Eric Jones for the International Security and Arms Control Project.

World War I (Handout #7) was written by Robin Riddle with the assistance of Joline Bettendorf for the International Security and Arms Control Project.

The Technologies of Warfare: A Selected List (Handout #10) was written by Robin Riddle and Lenore Schwan of the International Security and Arms Control Project with the assistance of Dave Bernstein of Stanford University and Steve Fetter of Harvard University. The chart was produced by Ms. Riddle. It is adapted from "From Rocks to Nukes" in Crossroads: Quality of Life in a Nuclear World (science curriculum, Jobs with Peace, 1983).

The graphs (Handouts #11A, #11B, #11C, and #11D) were written by Dave Bernstein, Robin Riddle, and Lenore Schwan for the International Security and Arms Control Project. They were produced by Ms. Riddle.

Overhead #1 was written by Lenore Schwan and Robin Riddle for the International Security and Arms Control Project.

Meanings of War (Handout #12) is reprinted from War, Ontario Institute for Studies in Education, 1979. It is adapted from "On the Morality of War," by Richard Wasserstrom, Stanford Law Review, Vol. 21, 1969, page 1627. We are grateful to Richard Wasserstrom, the Board of Trustees of the Leland Stanford Junior University, and the Ontario Institute for Studies in Education for permission to this article.

Four Hypothetical Cases (Handout #13) was written by Emmett O'Neill for the International Security and Arms Control Project. Its answer key was written by Lenore Schwan.

My Lai (Handout #14) and *The Verdict* (Handout #15) are reprinted from War Criminals, War Victims by Betty Reardon, p. 39-50, 1974, Random House, Inc. We are grateful to the World Policy Institute for permission to reprint these articles.

Appendices A-E were written by Robin Riddle for the International Security and Arms Control Project.

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About The International Security And Arms Control Project

The International Security and Arms Control Project (ISAAC) is a curriculum and staff development program aimed at improving the quality of elementary and secondary education about international conflict and security affairs. It is the first international issue-focused project of the Stanford Program on International and Cross-Cultural Education, complementing SPICE's five culture-based projects (Africa, China, Japan, Western Europe, and Latin America).

The International Security and Arms Control Project combines the technical expertise, research and educational resources of the Stanford Center for International Security and Arms Control with the curriculum and staff development programs of California International Studies Project (CISP). This combination of scholarly resources with large-scale systematic access to educators makes ISAAC unique in the field.

The ISAAC project is working closely with a small group of teacher associates primarily from northern California in developing, reviewing, testing, and evaluating curriculum materials appropriate for social studies (including history and psychology), literature, science, and economics classrooms. Strong emphasis is placed on balanced presentation, multiple perspectives, and critical thinking skills. In addition, all materials are developed with teachers' time contraints and desire for flexibility in mind. The curricula reflect sensitivity to the problems of teaching controversial issues. The curriculum materials are produced in cooperation with Stanford's Center for International Security and Arms Control. (See Appendix E for further details of the curriculum development process.)

For further information regarding the curriculum and staff development activities of the International Security and Arms Control Project, contact SPICE at Littlefield Center, Room 14, 300 Lasuen St., Stanford, CA 94305-5013, 415/723-1114.

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The Evolution of the Methods and Rules of War

Introduction

This eight-day unit is designed for use in social studies and science classes at the secondary (grades 7-12) and community college levels as a general introduction to the technical, organizational, legal, and ethical issues related to war. While this unit is not meant to serve as a complete history of war and warfare, it supplements the discussion of war by familiarizing students with important analytical perspectives. Students work in groups to discuss the characteristics of war, tactics, weapons, and society in the Stone Age, ancient Greece, the early Middle Ages, the Hundred Years War, the Mongol empire, World War I, and World War II. They then examine the changes in the technology of warfare, focusing particularly on technical developments such as the speed, accuracy, and yield of weapons. Next students study and discuss some of the rules of war, codes of conduct, and other attempts to limit or control the behavior of nations and individuals at war. Finally, many of the legal, organizational, and ethical issues relating to war are raised by the case study of My Lai.

Rationale

Since war has been central to the human experience of history, it is important to understand how wars were previously conducted. Changes in the technologies of warfare coincide with changes in the way wars are fought, and with the strategic, organizational, legal, and ethical frameworks in which wars are considered. As future citizens, it is essential that students understand these changes and their international, national, and personal implications. The overall purpose of the activities in this curriculum unit is to develop students' analytical and critical thinking skills regarding war.

This curriculum unit serves as an important supplement to most social studies texts. Few such texts consider how the rules of war or its weaponry have evolved over time. They tend to examine war as a compilation of battles, ignoring the historical development of concepts of war. Similarly, few science textbooks look at the roles science and technology have played in the development of weapons.

The decision to focus here only on conventional war was based on several reasons. The issues concerned with nuclear confrontation would require an entire unit in and of themselves, and such a unit would inevitably emphasize the peacetime impact of nuclear weapons on modern societies. As demonstrated by lesson three, modern wars typically involve guerilla tactics, to which the strategies and conventions of war are much more relevant than they would be in the case of nuclear "war." In light of these

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thoughts, the unit does not include a lengthy discussion of nuclear strategies.

Goals

In exploring the evolution of the methods and rules of war, students will:

- identify some causes and reasons given for wars
- reflect on the historical evolution of war
- recognize that the character of war is determined by a) the kinds of weapons available and b) the social structures and values of the societies using them
- recognize that the development and improvement of weapons has continued throughout history
- identify some milestones in the technical evolution of weapons
- identify reasons for technical advancements in weapons
- examine the linkages between changes in weapons and changes in the methods of war
- identify the ways in which people have attempted to limit or control warlike activity through codes, conventions of war, rules, and treaties
- consider the relationship of ethics to the methods of war
- consider the ethical and moral questions surrounding the rules of war and weapons developments
- understand the difficulties in establishing and enforcing a code of law which governs how war is conducted

The objectives for this unit are listed at the beginning of each lesson plan.

Suggested Sequence Of Activities

Before Day #1: Homework

Stone Age Reading: In preparation for the beginning of this curriculum unit, students read and analyze a case study of war between Stone Age tribes as homework.

Day #1: In Class

Introduction to Key Terms/Concepts, Discussion of Stone Age Reading, and Group Work on Case Studies: After a general introduction to some key terms and concepts, students discuss their homework reading on warfare in the Stone Age. They then begin to work in groups on case studies about warfare during different historical periods.

Day #2: In Class

Technologies of War and Group Work on Case Studies: Students work in pairs to complete a chart which provides data about weapons throughout history, from rocks and knives to modern-day nuclear weapons.

Day #2: Homework

Preparation for Case Study Presentation: Students prepare oral presentations on the case studies.

Day #3: In Class

Case Study Presentations: Groups present their case studies.

Day #4: In Class

Case Study Presentations and Discussion: Group presentations continue. Students discuss the major points of the case studies.

Day #4: Homework

Re-examine Technologies Chart: Students re-examine their technologies charts to see if after the case studies any additions or changes need to be made to their charts.

Day #5: In Class

Discussion of Case Studies and Weapons Changes, and Graphing of Weapons Changes: Relying on the technologies chart and the case study presentations, students discuss the overall changes in weapons throughout history. Students also work in groups to graph the changes in four quantitative characteristics of weapons on a chronological scale. Through a class discussion students try to discern the rate and direction of change of those characteristics.

Day #6: In Class

Review of Graphs and Context-Setting Discussion on Rules of War: Student groups present their graphs and draw conclusions about the changes in weapons technologies. Students then draw on their case studies in discussing the rules of war.

Day #6: Homework

"Meanings of War" Reading: Students read an article outlining one author's views about the meanings of war.

Day #7: In Class

War Theories, Four Hypothetical Cases, and Introduction to My Lai: After a lecture refining the two basic war theories presented in the homework reading, students individually respond to four dilemmas related to the limits and rules of war.

Day #7: Homework

"My Lai" Reading: Students read a short article as homework providing a general introduction to the My Lai case. Some students prepare for oral readings of the article.

Day #8: In Class

Oral Reading of "My Lai": After an oral reading of the trial of Lieutenant Calley, students discuss some of the practical difficulties of applying rules of war to real-life situations.

Key Terms And Concepts

The following key terms and concepts are boldfaced the first time they appear in the unit: chemical weapon, delivery system, destructive element, distance, energy yield, international law, just war theory, lethal area, moral restraint, non-combatant, prudential restraint, rules of war, strategies of warfare, technical advances, technologies of war, time-to-target, total war, war crime, and warfare.

See also a substantial list of key terms provided in Handout #9.

Adaptation

Appendices A, B, C, D, and E will be useful to teachers who want to adapt this curriculum unit. Appendix A provides a list of related activities for social studies, psychology and sociology, science, and language arts classrooms. Appendix B provides ideas for using this supplementary unit in conjunction with social studies and science textbooks. Appendix C demonstrates how this unit supports California's Frameworks and Model Curriculum Standards for History/Social Science and Physical Science. Appendix D provides a bibliography of related classroom and reference materials. Appendix E describes the educational philosophy of the International Security and Arms Control Project.

Each of the three lessons can be presented separately to students. To maintain the conceptual integrity of the unit, however, teachers are encouraged to use the three lessons in sequence.

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Lesson One Methods of Warfare and War Prevention: Technologies and Strategies

Introduction

The purpose of this five-and-one-half-day lesson is to introduce students to the stages and characteristics of the development of weapons technology, from the simplest weapons like rocks, to the complex warheads and delivery vehicles of modern military forces. As homework the day before the lesson actually begins, students will read and analyze a case study of war between Stone Age tribes. After an introduction to some key terms and concepts, students will discuss the homework reading. Students then work in groups to analyze other case studies of wars throughout history; each group makes a class presentation of its case study. Working in pairs and in groups, students then complete a chart summarizing the technological advances in weapons technology and graphs on particular aspects of technological advancements in weapons. Finally, they will discuss the chart and graphs in order to draw conclusions about the evolution of weapon technologies and strategies for conducting war.

Objectives

In this lesson, students will:

- read a case study of war between Stone Age tribes in order to practice analyzing weapons technologies and warfare strategies
- work in small groups to read, analyze, and prepare reports on case studies of wars throughout history (ancient Greece, the early and late Middle Ages, the Mongols, World War I, and World War II)
- discuss the case studies, focusing on the changes in weapons, tactics, strategies, and rationales for and attitudes toward war
- work in pairs to complete the chart *The Technologies of Warfare: A Selected List*, deciding from the given information in what ways each weapon listed was a technical improvement over those weapons that preceded it
- distinguish between the destructive element of a weapon and its delivery vehicle, especially in modern weapon systems
- graph the technical advances in energy yield, distance from launch to target, time from launch to target, and lethal area of

several weapons over time in order to see the accelerated rates of technical improvement in recent history

Materials

For Day One

- two copies per student of Handout #1: *Profile Sheet*
- one copy per student of Handout #2: *The Stone Age*
- maps or atlases (to be used in conjunction with readings on historical eras; not provided in this unit; see lesson plan)
- one copy for one-sixth of the students of Handout #3: *The Age of Metals*
- one copy for one-sixth of the students of Handout #4: *The Early Ages*
- one copy for one-sixth of the students of Handout #5: *The Hundred Years War: The Battle of Crécy*
- one copy for one-sixth of the students of Handout #6: *The Mongols*
- one copy for one-sixth of the students of Handout #7: *World War I*
- one copy for one-sixth of the students of Handout #8: *World War II: Global Warfare*
- one copy per student of Handout #9: *Key Terms*

For Day Two

- illustrations of a suit of armor, a lance, a spear, a catapult, a longbow, a crossbow, and any other technologies (illustrations are not included in the unit, though they can be found in any encyclopedia or other source; see lesson plan)

For Day Five

- one copy per student of Handout #10: *The Technologies of Warfare: A Selected List*
- one copy for one-fourth of the students of Handout #11A: *Time Vs. Energy Yield Graph*
- one copy for one-fourth of the students of Handout #11B: *Time Vs. Distance-to-Target Graph*
- one copy for one-fourth of the students of Handout #11C: *Time Vs. Lethal Area Graph*
- one copy for one-fourth of the students of Handout #11D: *Time Vs. Time-to-Target Graph*
- overhead projector and screen (optional)
- one transparency copy of Overhead #1 (optional)

Procedures: Preceding Day 1

1. Distribute to students Handout #1, *Profile Sheet*, and Handout #2, *The Stone Age*. In preparation for Day 1, students should make notes on the *Profile Sheet* based upon the reading about war between Stone Age tribes.

Procedures: Day 1

Context-Setting: 25 minutes

1. At the beginning of class, write the words "warfare," "technologies of war," "strategies of war," and "rules of war" on the chalkboard. Define the terms for students as follows:

   Warfare is how a war is fought--its methods and its rules. It includes armed conflict, weapons and materiel and troops; battle plans; reasons; and goals.

   Technologies of war generally means weapons and other instruments of warfighting and war prevention. Technologies include weapons and supplies; communication and transportation of men and materiel; delivery of the weapon whether it is a bomb or an arrow; devices to detect enemy weapons and attacks; and defenses against enemy technology.

   Strategies of war generally includes the offensive and defensive tactics used in warfighting. Strategies include the overall plans to win the war, and are greater in scale than tactics.

   Rules of war are agreed upon statements covering various aspects of warfighting. Rules are agreements between nations which govern their behavior toward each other.

   Explain to the students that for the next eight days they will examine these aspects of warfare to see how they are interrelated.

2. Point out to students that their reading about Stone Age people indicates that humans have had weapons throughout the duration of their existence. Ask students what early weapons were used for. (Possible responses include: hunting for food; defense against animals and other humans; attacking other humans for territory, possessions, beliefs, or in self-defense.)

   Ask students how each of the possible responses may be perceived as necessary for survival.

3. Remind students that the kinds of weapons developed depend on what is available to make them from. Ask students what weapons were available to Stone Age (prehistoric) people. Write their answers on the chalkboard. (Answers should include: fists and feet; rocks for throwing or cutting; sharpened sticks (early knives); clubs; spears (long sticks with pointed ends); and fire.)

   Remind students that these weapons are still used, and not only in technologically undeveloped areas.

4. Explain to students that a weapon is one of man's tools. One definition of a "better weapon" is a weapon that gives its user an advantage over his opponent; it kills people or destroys property more efficiently without putting the user in more danger. Weapons allow humans to kill each other without having to use their bare hands. In the psychological and physical sense, weapons make it easier to kill. Some weapons even allow the user to kill without seeing the victim. Using human ingenuity and adaptability, people have always tried to improve their weapons.

Note: Other definitions and criteria will be discussed later in this lesson.

Ask students how the list of weapons on the chalkboard could be improved by adaptation (**technical advances**). Tell them that improvements can be made both in the delivery of the weapon and in the part of the weapon which causes injury. Answers include:

- *fists-feet*: protect them with coverings of leather or of metal
- *rocks (cut)*: attach to a spear; combine with a club to make an axe
- *rocks (throw)*: use with a sling shot or catapult in order to deliver them farther and with greater force
- *sharpened sticks*: attach them to handles
- *clubs*: make them heavier; attach sharp objects to them to make axes or spiked clubs
- *spears*: make them shorter; improve the delivery system, (ie. invent the bow)
- *fire*: ignite the tips of arrows

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Ask students what man could invent or discover to defend against the weapons on the above list. Answers include:

- fists-feet: find ways to stay out of range; domesticate the horse and ride it; build a fortress and stay within it
- rocks: shields; armor; find ways to move quickly (horse)
- sharpened sticks: shields; armor
- clubs: avoid close combat; stay out of range
- spears and arrows: avoid close combat; stay out of range; build a fortress arrows can't penetrate; find terrain which the enemy can't move in, like hilltops, swamps, and heavy forest
- fire: construct buildings that won't burn

5. Ask students the following questions:

   - In what circumstances is a bow and arrow a better weapon than a spear?
   - In what circumstances is a spear a more efficient weapon than a bow and arrow?
   - How did discoveries relating to mining and working metals make some of the weapons more efficient? What are the advantages of having metals rather than sharp rocks? (Possible responses include: mass production; casting spear and arrow points is faster than chipping rock; made sword blades possible; metal for cart wheels for transferring supplies and for making war chariots; shields and other armor.)
   - How was delivering fire by arrow better than setting fire by hand? How did poisoning the arrowhead improve the weapon?
   - How is fire delivered from a distance by arrow a more effective weapon than just arrows?

6. Summarize the following for students:

   - Roughly how long have people been battling with each other? (Answer: Since prehistoric times.)

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- What are the reasons or causes of battles normally related to? (Answer: Battles are related to the needs and values of societies.)

- What are some reasons for changes in the conventions of war, (the usual methods of war-making and warfighting)? (Answer: Conventions have changed as societies, governmental structures, and weapons have changed.)

- What are weapons? (Answer: Tools.)

- What has happened in reaction to the improvements in weaponry? (Answer: Defenses have adapted and improved as well.)

- Give some examples of cases in which improvements have occurred when human ingenuity was able to make use of available resources. (Possible examples: the flint, used as a spearhead; fire, used on arrowheads; dynamite, used in blasting and in bombs.)

- Name the two parts of a weapon. (Answer: The **destructive elements** and the **delivery system**. What we often call a weapon may be just one part. For instance, a rock is not itself a weapon; it requires an arm or catapult to hurl it at a target; an airplane may be a delivery system for bombs or other missiles. A missile is any object designed to be thrown, dropped, projected, or propelled for the purpose of hitting a target.)

- What are some of the constraints which affect the kinds of weapons and tactics chosen in battle? (Answer: Weapons and tactics chosen are often influenced by the accepted rules of war, and the specific terrain. For example, battles at sea or in a jungle demand different weapons and tactics than battles on open land.)

A Case Study: 15 minutes

1. Focus on the reading and activities students should have completed as homework. Ask students to give their responses to the major categories on the *Profile Sheet* (Handout #1) in relation to Handout #2, *The Stone Age*. During the discussion, remind students to add the comments made by other students to their profile sheets. Be sure that the main points of Handout #2 have been raised. You may want to summarize occasionally and reinforce important points.

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Note: As all the profile sheets can easily be filled in correctly with information from the various case study readings, we have not provided teacher answer keys.

Group Activity on Historical Eras: 10 minutes and homework

1. Establish six groups and assign each group one of the following handouts: *Greece: The Age of Metals* (Handout #3), *The Early Middle Ages* (Handout #4), *The Mongols* (Handout #5), *The Hundred Years War: The Battle of Crécy* (Handout #6), *World War I* (Handout #7), and *World War II: Global Warfare* (Handout #8). Give each student Handout #9, *Key Terms*. Also give each student a new, clean copy of the *Profile Sheet*, Handout #1.

2. For the rest of the period and for homework, students are to read their assigned case study and work in their groups to fill in the profile sheet. Encourage students to find or to make illustrations of weapons and defenses used during their period. (Illustrations can be found in dictionaries and encyclopedias.) Inform students that they should know the words in italics, most of which are in Handout #9, *Key Terms*. They should also consult maps and be able to explain where the subject of their report is located.

   Inform students that on Day 2 they will have part of the period to work in groups to prepare a report to give to the class on their case study reading. The oral reports will be given on Days 3 and 4.

Note: Try to find pictures of the weapons listed on the chart for Day 2 (see procedures for Day 2).

Procedures: Day 2

Technologies of Warfare Chart: 25 minutes

1. Distribute Handout #10, *The Technologies of Warfare: A Selected List*. Divide students into pairs. Students should work in these pairs to complete the chart (Handout #10), following the directions on the chart. Complete the first few items with students to make sure they understand the assignment. Allow students 15 minutes to complete the chart.

2. After students have completed their charts, discuss the information on the chart.

   The teacher should first take note of the following points:

   "Approximate date developed for military use:"

(a) the dates represent dates of development, not dates of actual use. Consider for example the case of the H-bomb which has not been used in wartime, but has been developed and tested by several countries.

(b) Several items have been developed and used in wartime only to be improved upon at later dates. Consider the cases of the machine gun, the submarine-launched torpedo, and the cruise missile (called a V-1 when used by the Germans in World War II).

(c) The dates are approximate. In the case of the gun, many types were developed before and after the date listed on the chart. The point of the date is to provide students with a general idea of the history of development.

Note: The last column is titled "Technical advances." We have selected this phrase since improvements have been made in the ability to accomplish the technical goal, which is to attack/destroy/kill a target (human or property). It is essential to discuss with students whether technical advances are positive or negative advances for societies, individuals, and governments. We will return to this point again later in the unit.

The chart is only a partial list of technologies of warfare. Ask students if they can name some technologies which have not been included.

Also note that these technologies are for warfighting and war prevention, and for offense as well as defense.

3. In addition to ensuring that students have filled in the correct answers, be sure to make the following points (in order of appearance on the chart):

   - The first three entries on the weapons chart (foot/fist, rock, and knife) are weapons which can only be used in fairly direct confrontation between combatants. That is, the distance between combatants is not great. While a rock can certainly be thrown more than 10 meters, in order to destroy or disable a target, it is probably not effective if thrown a greater distance. (You may need to confirm that students know how long a meter is.) Therefore, the spear and bow-and-arrow allowed great changes in the methods of combat. Because these weapons can travel farther to their targets, combatants could be farther apart. Similarly, the combination of a rock and a sling allowed greater distance between combatants.

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- Show a picture of a catapult. It was one of the first weapons used for damaging property in addition to harming people.

- Show a picture of a crossbow. While the crossbow couldn't project missiles as far as the catapult could, it was much more accurate than the catapult or any other weapon of similar range.

- Point out that cannons did not have a 5 km range until several hundreds of years after they were first developed.

- Ask students upon what weapon the rifle improved. (Answer: musket.) How was the rifle a technical improvement? (Answer: the rifle could be reloaded quickly and had greatly increased range and accuracy.)

- In what other ways was the rifle an improvement? (Answer: As the rifle was factory-manufactured in large volumes, it was cheaper to produce than the musket.) It is essential here to demonstrate that there are several criteria for evaluating weapons.

- When the machine gun was first developed it was called the "killing machine." While the machine gun is perhaps best known for its impact during World War I, during what war was it first used? (Answer: American Civil War.)

- The grenade was one of the first weapons for which soldiers didn't need a line of sight to use the weapon. The grenade was used to kill soldiers in the trenches.

- Until the end of World War I, most land battles were fought on "fronts," where two opposing forces faced each other in parallel battle lines. These fronts were also called lines of battle.

- In World War I, many armed forces were described as "mechanized" because armies used tanks, machine guns, submarines, and bombers.

- When torpedoes were used during World War I, their range was 1 kilometer (.6 miles). Their range now is about 10 kilometers (7.2 miles).

- Poison is actually a very old weapon. Primitive people used poison arrows, and in 400 B.C. the Spartans used sulfur dioxide gas in sieges against Athenian cities. Specialized poison gases were developed and used in World War I.

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These anti-personnel weapons were banned by international treaties following the war, but countries continued to develop them and still stockpile them. **Chemical weapons,** such as anti-crop agents and defoliants, have been used in recent wars. They are often sprayed from airplanes. They are inexpensive to produce, but unpredictable in their effects. During the late 1980s, the possibility of a ban of chemical weapons received a great deal of attention from the international community.

- Ask students why toxic chemicals delivered in this way would blur the lines of battle. (Answer: It is impossible to target a small area, especially because wind causes the chemicals to spread unpredictably. Therefore, the chemical weapons are likely to affect **non-combatants,** either directly, by poisoning them, or indirectly, by contaminating their food or water supplies. Also, they can blow back on one's own troops.)

Group Reports: 25 minutes

1. For the rest of the period, students should work in their larger groups to plan their reports on the case study readings. These oral reports are to be given on Days 3 and 4. Each report should be limited to 15 minutes.

Procedures: Days 3 and 4

Group Reports: 15 minutes per report

1. Have the class take notes when the group reports are given. On Day 3, call on the "Age of Metals," "Early Middle Ages," and "The Mongols" groups to give their reports.

   On Day 4, call on the "Hundred Years War," "World War I," and "World War II" groups to give their reports.

2. At the end of Day 3 and Day 4, ask students if they have any questions about any of the case studies or group reports. Discuss the case studies, focusing on the changes in weapons, tactics, strategies, and rationales for and attitudes toward war.

3. At the end of Day 4, assign students to review "The Technologies of Warfare" (Handout #10) and their notes as homework on the group reports in preparation for a class discussion on Day 5. In addition, have students consider how weapons have increased in destructiveness and why nations go to war.

Procedures: Days 5

Summary Discussion: 20 minutes

1. Focus on the overall aspects of *The Technologies of Warfare* chart and the reports given during the previous two days by asking students the following open-ended questions:

    - List the reasons why nations go to war. Mention ways nations try to avoid war. Mention times when nations might perceive war to be the best option.
    - What conclusions can be drawn from the chart about changes in warfare?
    - How has the destructive power of weapons increased? When did the greatest advances in destructive capability occur?
    - How do weapons now perform their functions better than in the past? Can this be called an advancement? Why or why not?
    - How has the role of the soldier or sailor changed?
    - Have changes in weaponry made it easier or more difficult to prevent wars?
    - Have the changes in weaponry made warfare more or less humane?
    - What other criteria can be used to evaluate the changes in warfare?

Note: Allow the class or individual students to provide their own definitions of key value concepts in answering the previous questions.

2. Summarize the technical advances which have occurred with the following questions and comments:

    - Why might scientists argue that the most important advances are in range and efficiency (yield)? In what other (non-technical) ways could technologies be evaluated as more or less advanced? (Possible answers include: economic; ethical; ability to use successfully as a political weapon.) What does advancement mean?

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- Some sociologists argue that the significance of the individual is minimized as weapon systems become more complex. That is, complex weapon systems need several people to operate them. As more people become involved in the operation, no one individual's judgment controls the use of the weapon. Responsibility and decision-making are taken away from one individual and divided among many people performing related tasks on schedule. In modern warfare, decisions are often guided by the requirements of the technology.

- Some historians argue that the record of history does not show an increasing proportion of non-combatant to military casualties. As examples, these historians cite the destruction of cities in ancient times (through rape, pillage, massacre, and slavery) and the Thirty Years War. Others argue that history shows a rise in civilian deaths. As examples, these historians cite World War I, World War II, and the Vietnam War.

- In World War II, further mechanization of ground troops and the introduction of airpower (bombers) caused a change in war tactics. No longer was the goal to attack the front line of the enemy army, but rather to destroy "industrial centers" or cities where large civilian populations resided.

- Some people believe that the advent of nuclear weapons was the ultimate blurring of the lines of combat. Why do you think they might make this claim? Compare this blurring effect of nuclear weapons with the blurring which existed in wars fought by the Mongols when entire societies went to war.

Weapons Charts: 30 minutes

1. Divide the class into eight groups--two Group As, two Group Bs, two Group Cs, and two Group Ds. Distribute Handout #11A to Group A (*Time Vs. Energy Yield Graph*), distribute Handout #11B to Group B (*Time Vs. Distance-to-Target Graph*), distribute Handout #11C to Group C (*Time Vs. Lethal Area Graph*), and distribute Handout #11D to Group D (*Time Vs. Time-to-Target Graph*).

2. Ask students to examine the vertical axes of their charts. Ask if anyone knows what the notation 10^2 means. If the students are not familiar with this notation, explain that 10^2 means 10 x 10 or 100. Ask if anyone can guess what 10^3 equals. Tell students that this is exponential notation. It represents the base (10) multiplied times itself however many times the exponent indicates.

3. Explain that energy yield, distance traveled, time-to-target, and lethal area of weapons are all characteristics of weapons that have changed very quickly in recent history.

   Explain these terms to the students using Overhead #1 if you wish:

   - **Energy yield** is the amount of energy released when the weapon strikes its target and/or explodes. It is measured in mass of explosive energy (or TNT equivalent).
   - **Distance** traveled represents the farthest distance that a weapon can be propelled using the most practical delivery system.
   - **Time-to-target** is the time elapsed between the launch and detonation of a weapon. It is measured in seconds (s).
   - **Lethal area** represents the maximum surface area within which a weapon could cause certain death to humans. This quantity is measured in square meters (m^2).

4. Students should work in their groups to complete their charts. Group A will plot energy yield; Group B, distance; Group C lethal area; Group D, time-to-target.

   Point out that the values listed on all the graphs are approximates.

Procedures: Day 6

Review of Graphs and Charts: 20 minutes

1. Call upon each group to present a completed graph for the class.
2. Post the graphs where the class can see them or show them with an overhead projector.

Note: We have not provided answer keys for the four graphs as they are easy to complete.

3. Review the essential aspects of these graphs by asking students the following questions:

   - Point out the advances due to delivery system improvements and the advances due to improvements in the destructive elements.

- What is an "improved" weapon? (Possible responses: An improved weapon is one that meets the user's goal more effectively. An improved weapon may be one that kills people or damages property more efficiently, or one that limits damage to property. Efficiency involves increases in energy yield, in distance-to-target, and in lethal area, and decreases in time-to-target.)

- Which weapons made war radically more lethal or deadly? (Responses will vary.)

- What conclusions can be drawn from the charts about which historical period showed accelerated increases in the development of deadly weapons? How might you explain the answer? (Possible response: The 20th century. This century also saw the greatest number of general scientific achievements.)

- Which weapons seem to have been designed to destroy property and which to kill personnel? (Possible answer: Some weapons particulary suited to the destruction of property are the catapult, the cannon, and the submarine torpedo. Some weapons which seem to have been designed to kill personnel are the crossbow, the gun, the machine gun, and chemical weapons.)

- How have delivery systems changed warfare? How have new weapons required new methods of delivery? How has the invention of new delivery systems made new weapons possible? How has that changed the relationship of combatants to each other? Has this made it more or less difficult to be a combatant? (Possible responses include: Weapons can be carried greater distances; long-range delivery systems make it easier to inflict damage on an enemy that cannot be seen. Increased range also made it possible to strike out a nation's resources and reserves. This had the additional psychological impact of damaging public morale.)

- What conclusions can be drawn about the ratio of civilian to military deaths in different eras? How do you support your conclusions? (Possible responses: Remind students that weapons which blurred the lines of combat by being used directly or indirectly against non-combatants probably caused an increase in the ratio of civilian to military deaths. Therefore, the eras in which weapons increased in energy yield, lethal area, or distance were times when civilian deaths were likely to increase.)

- What conclusions can be drawn about the training necessary to be a soldier following the breakthroughs in technology that provided more advanced weapons? (Possible responses include: Training may have become more essential; compare, for example, the amount of training required to use a crossbow with the training required to fly a jet fighter plane.)

Note: Procedures continue with Lesson Two.

Profile Sheet

Government/Social Structure

Fighting Units

Goals/Reasons for Warfare

Rules/Conventions of Warfare

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Weapons/Manner of Delivery

Transportation

Tactics

Strategies

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The Stone Age

Introduction

All societies change over time, even those which have remained isolated from other peoples. When anthropologists attempt to discover how people lived in earlier periods, they look at the way people live now to get an approximation of what life might have been like in earlier times.

For more than 20 years a Catholic missionary, André Dupeyrat, lived with one such group of people, studying their culture. His research provided most of the information below about the people and the role of warfare in their lives during the time he was with them. Even though he wrote about these people's lives this century, they had none of the science or technology developed in other parts of the world; thus they are called a Stone Age culture.

Climate and Terrain

In the south-central mountains of Papua-New Guinea live *tribes* of people who had no contact with the outside world until the 1900s. For some of the more remote tribes, their way of life still remains that of a Stone Age people; they have no metal, glass, or pottery.

The area is mountainous and the climate tropical, hot and humid. There are no roads, and because of the mountains, the numerous swift streams are impassable by boat only a few miles from the coast. Transportation is by foot over trails cut through the snake-infested jungle. The vegetation grows back over the trails quickly so travellers must recut their way. If people need to communicate with each other quickly, they pass messages by shouting from mountain top to mountain top.

Thirty-two tribes live in natural clearings or in places they have cleared in the jungle. They all have different names, but a common language called Fuyughé.

Religion

The Fuyughé-speaking people have two distinct classes. According to their belief, before the god Tsidibé emerged from a tree, the area was inhabited by the "true men," a race so backward they did not even know they were men. Tsidibé created the Outame, who are therefore semi-divine and the elite class. The god gave these people everything they need for their existence: animals (especially pigs), birds, trees, vegetables (particularly yams), and their weapons (bows and arrows and spears with tips of sharp

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rock). The Outame are not supposed to intermarry with the "true men," and the 10 chiefs who rule the 32 villages are always Outame.

The natural world is also a spirit world of which people must be wary, especially at night when the spirits are said to be most active. Sorcerers who know chants, spells, formulas, and magic rites for killing or healing give people advice. Sorcerers learn by apprenticeships.

Along with the sorcerer, another important tribal member is the poet-singer. Fuyughé is a complex language and a poet is highly respected. All the people have strong voices, and music and poetry are important in their culture. It is the way they pass on their history, entertain themselves, and satisfy their need for artistic expression. They have few decorative arts, in contrast with other Papuan tribes.

Social Structure

The eldest male of an Outame family is the chief of a distinct territory. He is responsible for the well-being of his tribe. If the chief dies without a male heir (son), the tribe disperses and attaches itself to other tribes. Succession to the chief is hereditary by a very complicated and strict line of succession. None of the "true men" are ever chief, but the chief may appoint them to positions of honor or power. Women hold no positions of power. The chief's council members might compare to the following positions in the US: steward and primary advisor, a hereditary position, equivalent to Secretary of State; war chief, or Secretary of Defense; chief of wealth, or Secretary of the Treasury; chief of food, or Secretary of Agriculture; and the chief of peace, a position shared by the US President and his advisors.

The Outame chief has power of life and death over his subjects, but he does not carry out the death sentence. In fact, although he declares war, he is not supposed to handle weapons. He watches as the war chief plans and conducts battles. The head chief also calls on sorcerers for help, and he holds the entire wealth of the tribe: all the pigs and ornaments--such as dog's teeth and feathered ceremonial headresses. It is accepted that the "true men" own all the land, since they were there first. They supply the elite class with food from the land. Most of the time the chief is indistinguishable from the rest of the tribe. He does the same work as the rest and lives among them in the same kind of dwelling.

Daily Life

Houses in this part of Papua-New Guinea are simple. A rectangular wood frame is topped with thatch and has a dirt or wooden floor. Some homes are elevated on poles and are reached by climbing up a notched wooden pole. One large building, called a longhouse, is a kind of men's club from which women are excluded and where the men gather to socialize in the evening. The men sometimes sleep there.

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According to one scholar, many of the tribes in this area separate males at puberty from their mothers. The boys live in an all-male group until adulthood--about age 20.

Women care for the children and pigs and do all of the farming. Each day the women and children go to vegetable patches to work. Men take their weapons and hunt, gather wood from the forest, or guard the women. Their food is mostly vegetables and any animal, insect, or reptile they can catch. Women work the land with sharp sticks. Cooking is done in leaves, wooden troughs, or on hot stones in fire pits. Knives are sharpened bamboo or bone; hatchets are made from flint rock. The tribe has a few dogs for hunting and for eating. Clothing for men and women is a loincloth woven from vegetable fibers.

Marriages are arranged in infancy, and men may have as many wives as they can pay for through dowries. Because of their poor diets and ignorance of elementary hygiene, they normally have short life spans.

War

When the tribe is threatened with attack, the women gather all the food into net hammocks and take the valuables, including the children and the pigs, into the forest to hide. The men outline their bodies in gray clay and soot, add streaks of red and yellow, and confront the perceived enemy by shaking their spears, making loud and threatening noises and stamping. The purpose is to try to frighten the enemy. If taken by surprise, the tribe will run away.

Attacks on other tribes are few and are generally made for specific reasons. Although theft of property (especially pigs) is one reason, the most common is a personal feud caused by insult. If a family member is insulted or killed by a member of another tribe, his family-tribe is honor-bound to revenge him or her, even if it takes several generations to do it; therefore, the feuds continue indefinitely. If someone is killed by sorcery, the dead person's family must first determine who ordered the death before exacting revenge.

The warriors prefer to ambush a single enemy, either man or woman, rather than risk attacking a village. When preparing for an attack, the people hold a feast, dress in their finest headdresses and ornaments, and dance and sing. These ceremonies may go on for several days, until the war chief decides the time for attack is right. After the battle, they hold another festival to celebrate and honor the slain. Part of their belief is that they take on the qualities of what they eat. They eat their enemies, certain parts of which give them strength, fierceness, or fertility. They believe they literally absorb the strength of the part eaten. Also, they keep the bones of people who die and wear them as ornaments.

It would not be accurate to describe these battles as wars as we understand the term. Their hostile actions are not armed struggles for territory or

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power with a beginning or end, but rather sporadic but unending family feuds or raids. It takes a great deal of their time to hunt or grow food and to make everything they use; day-to-day survival is too time-consuming and tribal numbers too few to engage in continuous battles.

With a few differences related to variations in geography--climate and terrain--the Fuyughé people live much like other stone-age peoples, with two important exceptions. Anthropologists would be quick to point out that fighting to the death is unusual in these societies, and nearly all of the early cultures had early taboos against cannibalism. Most primitive people practiced ritual battles, more in the spirit of games, and although warriors were often injured, they stopped short of killing each other. Death in battle was rare.

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Greece:
The Age of Metals

Terrain and Climate

Modern Greece is a small country on the southeastern tip of Europe where Europe and Asia meet. In the fifth century, however, Greek civilization included hundreds of independent city-states extending eastward along the Aegean seacoast into present-day Turkey and Lebanon, westward along the Adriatic Sea as far as Yugoslavia, and to the many islands off the coasts of these countries.

From the time of early migrating *tribes*, the land and the sea influenced the societies which eventually formed the civilization we know as ancient Greece. In this long, narrow country of peninsulas and islands, mainland coastal settlers found travel along the seacoast easier than overland travel because of the limestone mountains and the scarcity of rivers. Inland settlers remained isolated from each other in fertile valleys between steep cliffs. Even as late as 776 B.C., athletes from Sparta, an inland city, had to travel for a week to get to the first Olympic games, only 60 miles away.[1] It is not surprising that the early people, migrating from different areas and isolated from each other, developed different governments and societies. However, they shared a common language and religion, (and also religious shrines)--which are potent cultural bonds.

People lived in agricultural communities, spending most of their time coaxing food and fiber crops from the stony land. The poor soil, sparse water sources, and arid climate could not support large-scale farming or herding, so the Greeks raised sheep and goats for wool, meat, cheese, and milk. They also had a few horses or oxen for plowing or pulling carts. They cultivated vegetables, olive and fruit trees, grapes (especially prized for wine-making), grew flax for linen, and kept beehives. The Aegean and Adriatic Seas, which surround much of the country, never supplied large quantities of fish--there is not enough marine vegetation to support large fisheries[2]--but there were many good natural harbors, though during winter winds made sailing dangerous.

Because it was located between Europe and Asia, Greece was well situated to become a maritime trading center. The Athenians, coastal Greeks, became skilled, adventurous sailors, and developed related skills like boat-building and navigation.

Greek trading ships sailed west to Spain, east to Syria, north to the Black Sea and Russian Crimea, and south to Egypt and Libya. Colonists from the cities on the mainland formed new *city-states* on the rim of the Adriatic and Aegean, retaining loose ties with their mother states.

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Religion

In a land in which survival was so perilous, people's religious beliefs reflected their fear of and dependency on nature. Their world teemed with natural spirits, local gods, and the more powerful gods who lived in the north on Mount Olympus. There were evil spirits but no devil. Each house had a shrine to Hestia, goddess of the hearth, as well as to other family gods.[3] People could consult a god through a priest or priestess at shrines, and receive advice or a prophecy. The gods had the same qualities and desires as humans, but they were immortal and had supernatural powers. Sacred places and communal religious festivals were important elements of Greek life.

Independent City-States

The Greeks were one of the ancient cultures to develop the independent city-state as the basic governmental structure. A "polis" (the term for an independent state) covered a very small area and was separated from neighboring states by water or by hills. As early villages expanded into cities (quite small by comparison with cities today), the rulers built walled fortresses, usually on hilltops, with living space for themselves, their families and servants. Tradesmen set up shops and homes at the base of the fortress, called an "acropolis," and others farmed a short distance from it. Eventually an acropolis became the city center where men gathered to conduct the business of the city. When under attack, all the people retreated to the acropolis until the siege ended. The acropolis also had a temple or temples dedicated to the gods or goddesses which the people believed protected them.

Each city-state had its own laws, money, military, and system of government, and citizens of each polis "felt themselves tightly bound together and separated from citizens of any other state."[4] Two city-states, Sparta and Athens, although only 120 miles apart, illustrate the independence of Greek city-states at the time of the Persian invasion in the fifth century B.C..

Sparta was an *oligarchy*--that is, it was ruled by an elite based on wealth. Citizens had to be male, native born, and property-owning. Only citizens could hold office or vote; in the 5th century, Sparta had approximately 300,000 inhabitants but only 4,000 citizens.[5] The Assembly of citizens was guided by a *steering council* of 38 elected Elders and two Kings. The Kings were war chiefs; during wartime, one remained in Sparta and the other led the troops. Five elected "Ephors" controlled the execution of policy.[6]

In Sparta, all able-bodied males were soldiers. They were taken from their homes at age seven for military training. Even if they were married, they lived in military camps until they were 30 years old. This left the care of the farms and households to women and gave women a position of some influence.

Though Sparta was distant from the sea and never became a maritime power, its army conquered most of the Peloponnesus. In contrast with the contentious Athenian democracy, Sparta was a stable, conservative, predictable society, not much influenced by foreign cultures. The English adjective "spartan" describes the people and their society: "Like or characteristic of the Spartans; warlike, brave, hardy, stoical, severe, frugal, highly disciplined."[7] Spartans prided themselves on their silence; they spoke only when necessary, and even then as tersely as possible.[8] All city-states were competitive with others and perceived each other as rivals; Sparta maintained its tough standing army because of this rivalry and because it needed to keep tight control over its own people.[9] Its superior military and orderly civic life were admired by many other Greeks and when other city-states were threatened they often turned to Sparta for help. When Persia invaded for the second time in 480 B.C., the Greeks owed their victory first to the disciplined and well-trained Spartan troops, and secondly to the Athenian navy.

The first experiments with *democracy*--rule by the ruled--evolved in Athens. After 508 B.C., the Assembly--all male citizens over 18--held full power of governance. There were no elected representatives; citizens spoke directly to each other and to their "Archons," executive leaders in the Assembly. Athenians respected the power and beauty of language, revered good speakers and writers, and were enthusiastic debaters. Arguments in the Assembly were not only allowed but encouraged. Whatever citizens decided in the Assembly was law, and they could change or revoke old laws. (Their openness to new ideas and to change was perhaps a result of their frequent contact with the foreign cultures with whom they traded.[10]) In spite of this opportunity to directly participate in the running of the country, only about 6,000 out of 45,000 male citizens did so.[11] Still, collecting 6,000 men in one place to discuss problems and make decisions became unmanageable. In about 487 B.C., a reformer called Cleisthenes instituted the Council of 400, a steering committee which consisted of citizens chosen by lot from different districts to serve a one-year term. Generals and city architects were elected, but jurists and Archons were chosen by lot. Citizens had a duty to serve the state and, unlike in Sparta where every man was a professional soldier, ordinary Athenians of all occupations became soldiers and sailors in time of war. (Slaves were rarely permitted to bear arms.)

Only men had voting and legal rights. Women were considered inferior beings whose role was to work, to bear children to carry on the male line, and to keep the household running. Marriage was a political or economic arrangement, and men preferred the company of other men or of mistresses to that of their wives. In the 4th and 5th centuries B.C., there were some stirrings of revolt in the female population in Athens; playwrights of the time may have been sympathetic to their cause, since many of the plays written in that period have strong females as fearsome as the male characters. In practice, however, women remained essentially powerless even as they became increasingly influential.

As the Athenians were developing democracy at home, they were supporting it by developing a trading empire through their distant former colonies and by exacting tribute from those colonies through their military presence. This created resentment in many of the cities across the Aegean on the Asian coast.

Conventions of Warfare

The limitations of the self-contained city-states, each of which had to defend itself, were made clear to the Aegean Greeks in 490 B.C. Darius I, King of the Persian *empire*, who had taken control of disaffected Greek city-states in the region of modern Turkey and Lebanon, invaded just 20 miles north of Athens at Marathon.

The conventions of warfare at the time were well established. Troops moved by ship or by foot, carrying their own supplies. (Small carts pulled by draft animals would have been useless in Greece; the terrain did not permit the use or construction of roads.) The heavy soldiers of the *infantry* which fought the main battles were protected by bronze helmets and shin guards, and carried on their left arms rectangular bronze shields which covered them from the shoulder to below the knee. Their weapons were short, wide-bladed swords, and 16-foot long, metal-tipped spears, used for thrusting. The heavy infantries of opposing armies formed in close ranks with as many rows as possible. They presented a solid line of shields with spear points projecting in between. A rank of marching soldiers was called a *phalanx*.

The two armies in the conflict advanced toward each other, met, and thrust their spears and shields at each other. The first ranks usually died, pushed from behind by their own troops and unable to retreat. Succeeding ranks climbed over them and continued the battle. The first army to break and run usually lost, because they ran into their own advancing troops. Troops on small horses were sometimes used as mop-up forces, cutting down stragglers. Commanders had little to do once the battle started, because the clattering made it impossible for them to give orders.

The Greeks are credited with the perfection of a disciplined, mass attack, in which "a few hundred men acting in concert, moving in the same direction and with a common purpose, will always be more powerful than a mob ten times their number."[12] The Spartans used the first marching band--of flute players only--to keep them in step and in ranks. Discipline and determination to fight were more responsible for winning battles than were numbers, as the Greeks learned in their battles with the Persians.

The Persian Wars

When Athens received word that the Persian fleet was coming, it tried to get help from other cities but was refused by all except for Platea. Athens, with its citizen army, knew it was vastly outnumbered by a well-equipped, experienced Persian force. (While the Greeks had developed city-states, Persia had become an empire, ruled by a single leader who controlled everything and everyone within a vast territory. Such leaders had to have strong, centrally-controlled and expensively-maintained armies to keep the empire under control.)

The Athenians prepared to fight to the death against the Persians. No quarter was given in these battles: no one took prisoners; no one surrendered because all the soldiers were killed and all conquered citizens were killed or sold into slavery; cities were razed.

The Athenians and their Platean allies were led by the imaginative tactician Miltiades. Rather than waiting inside the walls of Athens to be attacked, Miltiades took advantage of his army's knowledge of the surrounding terrain, their skill at man-to-man combat, and most importantly, surprise. As the disembarking Persians started to form their ranks, the Athenians attacked at a run; instead of concentrating their forces at the center (they hadn't enough manpower to match the Persians), they put greater numbers of men on the *wings*. These were new and surprising *tactics*. The Persians broke through the Athenian center, but the Greek *flanks* defeated the Persian flanks, turned in to the center, and encircled the Persians who broke and ran for their ships.[13] Seven ships were burned by the Greeks before the Persians escaped.[14]

Soon after the first Persian invasion, the city-states formed an uneasy confederation and appointed Sparta commander of both land and sea forces. The next large invasion did not come until 480 B.C., led by the new Persian king, Xerxes. In the ten years between the Persian invasions, the Greeks had fortified the walls of their cities, Sparta had improved its army, and Athens had concentrated on developing its greatest strength, seamanship, by putting into practice the first mass production lines for building ships.[15]

These fighting ships were called *triremes* because they had three tiers of oarsmen staggered at intervals so that the oars would not hit each other. (Sails were not used on fighting ships.) On the flat deck, rows of soldiers with shields and swords waited until the ships drew close enough for hand-to-hand combat, although ships would first try to sink each other by ramming with metal-tipped rams on their prows. Needless to say, to maneuver these ships took great skill and a great deal of practice for the oarsmen.

In 480 B.C., the Persians launched a two-pronged attack, marching around the north coast through Macedonia while again sailing north of Athens. Three hundred Spartan soldiers met the host of Persian soldiers in the pass at Thermopylae and held it until a Greek traitor led the Persians through another pass, enabling them to attack the Spartans from the rear. The Spartans died to the last man, but killed great numbers of Persians and delayed the Persian army from reaching Athens until all the citizens could be evacuated to the island of Salamis. The Persians took Athens and burned the Acropolis.

From Salamis, an Athenian leader named Themistocles, in charge of naval tactics, sent his 250 ships manned by 40,000 men[16] against the 600-ship Persian fleet. The Greeks, using tactics similar to those of their land forces, lured the enemy into fighting in the narrow Bay of Salamis. Their rapid attacks had the slower, larger Persian ships unable to maneuver; the Greeks had loaded the decks of their ships with soldiers who, in the crush and confusion of closely-packed ships, engaged the Persians in hand-to-hand combat. The Persian fleet was destroyed, the Spartans won the next land battle, and without its ships or soldiers, Persia was permanently defeated. The Aegean was again under Athenian dominance, trade increased, and, in 448 B.C., Persia signed a peace *treaty*.

Presentation guidelines

1. Try to include the following points in your presentation:
    - the importance of the city-state, or Polis, to the making of war
    - the importance of certain conventions of war
    - the tactics used by Greek soldiers in making war
2. Try to answer these questions in your presentation:
    a) Do you think the Greeks had sophisticated strategies or weapons? Which do you think was more decisive in their war-making?
    b) What is a good example of the use of tactics or weapons which you can show to your fellow classmates? Can you draw it out on the chalkboard?

FOOTNOTES

[1] Ancient Greece, William Harlan Hale, 1970. American Heritage Press, New York City, NY, p. 5.

[2] Ibid., p. 9.

[3] The Ancient Greeks, Chester G. Starr, 1971. Oxford University Press, New York City, NY, p. 9.

[4] Ibid., p. 45.

[5] Hale, p. 119.

[6] Starr, pp. 113-114.

[7] Webster's New World Dictionary of the American Language, second college edition, David B. Guralnik, editor-in-chief, 1980. Simon and Shuster, New York City, NY, p. 33.

[8] Hale, p. 124.

[9] Ibid., p. 103.

[10] Ibid., p. 104.

[11] Starr, p. 57.

[12] War, Gwynne Dyer, 1985. Dorsey Press, Homewood, IL, p. 36.

[13] The Warring States of Greece, A.R. Burn, 1968. Thames and Hudson, London, England, p. 85. And Dyer, p. 37.

[14] Hale, p. 126.

[15] Dyer, p. 40.

[16] Ibid.

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War In The Early Middle Ages

Historical Overview

In 476 A.D., Germanic invaders called the Visigoths forced the Emperor of Rome from his throne, ending an era of a thousand years of Roman domination of Western Europe. For the next 300 years, Western Europe was the battleground for warring Germanic *tribes,* from the Vandals in Spain to the Angles and the Saxons in England. Eventually these tribes settled into the lands they had conquered and established loosely-knit warrior societies, ruled by one family or a group of families.

The ruling families of each society were headed by one chief and a council of all the adult males who were not slaves. Together they decided the policies of the tribe, when to go to war, and how to fight. Later, when some of these tribes joined to form kingdoms, the structure of their society remained basically the same.

The region of present-day France was inhabited by one such people known as the Franks. Under the leadership of a warrior-prince named Clovis, the Franks managed to force other tribes out of neighboring lands and established a kingdom for themselves. For 200 years, members of the Merovingian dynasty, the descendants of Clovis, ruled the kingdom of the Franks.

In the eighth century, Arab invaders from North Africa, called the Moors, raced unchecked through Spain and into the south of France and threatened the security of the Frankish kingdom. At the Battle of Tours in 732 A.D., a royal official named Charles Martel led mounted soldiers and *infantry* to a decisive victory over the Moors. The Merovingian kings had grown considerably weaker over the years, and with the successive invasions during the seventh and eighth centuries, they could no longer control regional officials like Charles Martel. After the victory at Tours, Charles was able to seize power for himself and establish a new line of Frankish rulers. His son Pepin, the first of the Carolingian kings, successfully forced the Moors out of the Frankish kingdom, back across the Pyrenees mountains and into Spain.

The grandson of Charles Martel became the first ruler since the Romans to unite the lands of Western Europe under a strong, centralized government. Charles the Great, or Charlemagne, took the throne in 768 A.D. and, after 60 military *campaigns* in 30 years, succeeded in doubling the size of the Frankish kingdom. In 800, the pope (the head of the Catholic Church) declared Charlemagne emperorof all the lands he had conquered. The new *empire,* with its capital at Aachen in Germany, included all of present-day France, Germany, and much of Italy.

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Military Service and Weapons

Some scholars argue that the military successes of the Franks were in part due to the introduction of required military service for all free men.[1] All adult males who lived in the Frankish kingdom were obligated to serve in the armed forces whether they were Franks or not. With so many men available for military campaigns, Charlemagne was well prepared to stretch his empire over vast territories. The more lands he conquered, the more men he would *draft* into his army. Other scholars argue that this required military service was insignificant. They believe that it was common practice for everyone to fight, and that all free (non-slave) men and noblemen justified their existence through fighting. War was simply a custom of the age.

The men who fought could be called out by the king at any time, and were required to provide their own equipment. Those who served as foot soldiers (infantry) were equipped with swords, daggers, and short spears called *javelins*. Some infantrymen were chosen as *archers* to launch a stream of arrows when enemy lines were first seen. Others hurled enormous battle-axes ("franciscas") just before contact was made. None of these soldiers wore *armor*, but most carried long oval shields for protection. Until the early Middle Ages, the infantryman was the most common type of soldier on the battlefield.

In the time of Charlemagne, however, the mounted warrior (a member of the *cavalry*) became increasingly important in battle. Faced with the threat of invasion from the Moors in the south and the Vikings in the north, the Franks needed the extra mobility and efficiency that the horse provided. The *stirrup* (invented by the Chinese in the seventh century) enabled the mounted soldier to sit firmly in his seat, with his feet through the rings of the stirrup, with little fear of being toppled from his horse by enemy javelins. The cavalryman, who had previously been restricted to firing arrows and hurling javelins, was now able to carry a long, heavy spear, called a *lance*, into battle. He could hold the lance firmly by his side and charge forward on his horse, ramming the enemy with enough force to knock over a heavily-armored fighter. These mounted soldiers, later known as *knights*, became the most important type of soldier in the eighth and ninth centuries.

The knight wore a helmet and protective armor called *chain mail*, and carried a shield and sword along with his lance. The chain mail he wore consisted of hundreds of small iron rings woven together into a coat which stretched from the neck down to the knee. By the end of the ninth century, each knight was so loaded down with weapons and armor that he was often unable to carry all of his equipment alone. For an extended campaign, a knight would need at least one more horse for an esquire, or shield-bearer, and in later times, he would bring with him a groom and even one or two foot soldiers as guards. It was nearly impossible for each knight to provide equipment and supplies for himself and for the men in his private guard.

During Charlemagne's time, some attempts were made to create a supply service, consisting of a long train of carts that carried flour, wine, and meat to the men. Yet these slow-moving supply wagons could be a burden as well; an army that needed to move swiftly in retreat, for instance, would have to wait for its supply train to catch up. Charlemagne also ordered that knights should bring to the battle small hand mills for grinding grain, as well as a variety of basic tools, including shovels, axes, and wood planes.[2]

Like the foot soldier, the mounted knight was obligated to serve as much as a half-year in the army each time the king called him out, and to provide all of his own equipment.[3] But the ordinary free man in the Frankish kingdom could never afford the armament and the training that was required. Most likely he was a poor farmer, or peasant, who was too busy with the chores of day-to-day survival to worry about finding a good horse and good armor for the next war. The peasant of Charlemagne's day farmed his small plot of land in peacetime, and when he went to war, he served as a light infantryman.

Only the wealthier landowners in the Frankish state could afford to pay for the arms and horses necessary for a mounted knight in battle. Many of the most skillful warriors were given large pieces of land in return for services and an oath of absolute loyalty. These land-owning warriors, called vassals, could then afford to serve as knights in service to the king. Many of these vassals gained political power in the villages where they lived, and some became royal officials in the administration of Charlemagne's empire, serving the king both in peacetime and in war.

Relationship Between the Church and the Kingdom

As early as the sixth century, when Clovis converted to Christianity, the Frankish kings cooperated with the pope in Rome, Italy. According to some scholars, this cooperation was seen as customary because the Franks believed there was no separation of function between Church, clergy, the people, kingdom, and Empire.[4] In exchange for political control over Church officials residing in the Frankish state and over Church property within the Frankish state, the kings offered protection to the pope. (The pope sought protection against the barbarian neighbors who invaded his lands.) According to some scholars, the support of the Church was useful in pacifying the Frankish peasants and in gaining support for wars against "heathen" (non-believer) tribes, who lived at the borders of the empire.[5] Other scholars argue that the Church and pope had little power; whatever the kings wanted to do, they did without the need for the Church's approval. Since the kings were Catholic and rulers of the empire, the people assumed that the kings controlled the church and the church's lands; the pope was there only to praise.

Augustine's Doctrine of Just War

Much of the thinking about warfare in the early Middle Ages relies upon St. Augustine's doctrine of *just war*. Augustine was a famous Catholic bishop in Rome in the fourth century, during the period of Rome's decline. He believed that the real evil in war was not in war itself, but in the love of violence and cruelty. According to Augustine, a private individual should not kill an attacker in self-defense because his action would be based in passionate hatred. However, Augustine believed that some warfare was necessary; not all war was seen as inherently evil or sinful. Rulers and officials acting in the line of duty could kill without committing sins of passion and hatred. Soldiers, for example, could justifiably wage wars under the order of the king, without breaking the commandment, "Thou shalt not kill." In this way, Augustine cleared the individual soldier of moral responsibility for his actions and placed the sole responsibility for war-making on the head of a king or government.[6]

To Augustine, wars that avenged injuries were just, as were wars that were declared on the command of God. According to one scholar, Augustine did not consider the violent coercion of heretics (those who held religious beliefs that differed from Christianity) as just wars. Under Augustine's doctrine, the non-violent punishment of heretics and heathens (non-believers) was seen as a form of charity with divine purpose.[7]

The Pope, the King, and War

One scholar argues that with the "collapse of Roman authority in the west, early medieval observers tailored ancient thought on warfare to their own necessities."[8] Many of these "observers" of the early Middle Ages were clergy who probably thought about Augustine's doctrine of just war; these thinkers encouraged religiously motivated wars.[9] One religious figure of this time period was Pope Gregory who, unlike Augustine, explicitly considered the coercion of heretics as a proper kind of war.[10] At this time, Italy was becoming more unstable given the decline of the Roman Empire and the threat imposed by the neighboring Lombards (who were considered heretics). Gregory organized the defense of cities and gave advice on military tactics, all in the name of God and the Church.

In 800 A.D., Charlemagne was crowned as emperor of the West by the pope. "Charlemagne," writes one scholar, "eagerly adopted Gregory's program as his own."[11] Charlemagne and the pope sought to achieve the same holy purpose: to restore the Roman Empire in the west, and thereby achieve peace and order.[12] Charlemagne thereby added religious and moral authority to his political authority. The expansion of Christianity became linked to Charlemagne's various *holy wars*.

According to one scholar, the pope advised the Christian king to drive out those who did not believe in Christianity and to protect both the Church and the kingdom.[13] The fact that Charlemagne received a direct request from the pope for aid in fighting the Lombards served as justification. Similarly, the fact that the Saxons "refused to submit to Christianity justified their conquest and forced conversion."[14] Although earlier Carolingian kings had prohibited the direct involvement of clergymen in war, Charlemagne expected his bishops and abbots to participate in the military campaigns.[15] Wars were, therefore, justified by Charlemagne's authority and religious purposes.

Presentation Guidelines

1. Try to include the following points in your presentation:
   - the importance of the stirrup
   - the social and economic differences between the knight (mounted soldier) and the light infantryman (foot soldier)
   - the different tactics used by knights and infantrymen
2. Try to answer the following questions in your presentation:
   a) How did the notion of "just war" affect the character of war?
   b) Why couldn't all soldiers use the new tactics developed by knights?

FOOTNOTES

[1] Warfare in Feudal Europe 730-1200, John Beeler, 1971. Cornell University Press, London, England, p. 9.

[2] Ibid., p. 15.

[3] Ibid., p. 14.

[4] The Just War in the Middle Ages, Frederick Russell, 1975. Cambridge University Press, Cambridge, England, p. 9.

[5] A History of the Modern World, R.R. Palmer and Joel Colton, sixth edition, 1984. Alfred Knopf, New York City, NY, p. 25.

[6] Russell, p. 20-23.

[7] Ibid., p. 23-25.

[8] Ibid., p. 27.

[9] Ibid., p. 27.

[10] Ibid., p. 28.

[11] Ibid., p. 28.

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[12] Palmer and Colton, p. 25.

[13] Russell, p. 28.

[14] Ibid., p. 29.

[15] Ibid., p. 29.

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The Mongols

Terrain and Climate

For centuries *nomads* drove their herds over a vast area in Central Asia, now part of China and the USSR, which included the inhospitable Gobi Desert, the grassy plains of the Russian steppes, and parts of Siberia. In summer, thunder and lightning storms bringing hail could be followed by sudden heat waves. Winters were so cold that the people wore furs and greased their bodies to stay warm.

Daily Life

A powerful tribe named the *Mongols* claimed the best grazing and water grounds from Lake Balkhash east to the border of Mongolia and to the northern edge of the Gobi. Their foods were meat, milk from horses, sheep and goats, and some wild grains. They lived in round, dome-topped tents made of felt called yurts, in which they kept all their possessions. Sometimes the yurts were mounted in carts and pulled by yaks or camels, as many as six abreast. They were, in effect, covered wagons. If the ground was too rough for the carts, or if the nomads wanted to move faster, the yurts could be taken down and packed on the animals. A nomad encampment sometimes contained hundreds of yurts because the people lived in *clans* (family groups) led by their khan. A *tribe* consisted of many clans, and a gathering of a tribe could have a camp of 40,000 yurts.

Women and girls tended the yurts, kept the fires burning, made tents and clothes, and cooked. They also drove the animals that pulled the carts. Boys fished, hunted small game, and watched the herds even in the harshest weather. Men drove the herds, though they spent a great deal of time fighting each other and stealing each other's herds. Their transportation, defense, food, and wealth depended on the herds.

Genghis Khan, born Temujin (1162?-1227 A.D.)

Because his people had no written language, Temujin's life was recorded by the people he invaded or by those who repeated tales of him. He was the eldest son of the Khan of a Mongol clan. When he was 13, his father was poisoned by a rival Khan, and by tradition Temujin should have been elected to take his father's place. Instead, two-thirds of the warriors left the clan to find a stronger protector. Temujin and the few who remained faithful to him fought others who wanted to take his herds and his prime grazing land. By the age of 17, he had reclaimed his grazing lands, rebuilt his herds, and made new alliances. In 1206, when he was 44 years old, he convinced all the Mongol clans to unite and to elect him sole leader of the

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tribe, the Genghis Khan. He died twenty years later on his way to overrunning Europe, after conquering all of central Asia and large territories in China and in the Moslem Middle East. And he still couldn't read.

Mongol Warriors

The men Genghis Khan led were referred to as the Mongol horde, but in truth, their numbers were never large enough to justify the name, and the armies of the countries they devastated outnumbered the Mongols greatly. Yet the Mongols must have seemed numberless to their victims--as impersonal, destructive, and unstoppable as the storms.

The Mongols owed their conquests to their horses and to Genghis Khan, who, whatever else may be fairly said about him, was a brilliant tactician and political organizer.

Mongols spent most of each day in the saddle. Superb horsemen, they had used saddles with *stirrups* since the fourth century[1] and could control their horses without reins, leaving both hands free to use weapons. Their great herds of horses allowed them to keep several fresh mounts in reserve, which was a great advantage in battle over enemies who sometimes had better but fewer horses.

Their weapons were lightweight and simple; although they had leather *lassos*, *lances* with hooks on the end for pulling enemies off their horses, axes, and short, curved swords for close combat, they avoided using them. Their preferred battle tactics depended on swift bow and arrow assaults from galloping horses. They were protected by light *armor* of lacquered leather--breastplates and helmets with a flap at the back to protect the neck. Sometimes they carried shields made of wicker.

Tactics

Genghis Khan discovered his style of warfare early in life and perfected it by defeating rival tribes. Once when on the move, his people were attacked by their old enemies, the Targutai. Genghis Khan had 13,000 warriors and the Targutai 30,000, but they wore cumbersome iron armor and carried iron shields and lances, all of which weighed down the horses and foot soldiers. They also used the classic *phalanx* for attack, lining up shoulder to shoulder in close formation.

When a herdsman rode back to tell the caravan of yurts that the Targutai were approaching, Ghengis Khan had all the carts pulled together to make a square into which he drove the herd--the same defensive move that wagon trains crossing the prairies in the western U.S. would use 700 years later. The women and children hid behind the wooden carts and, when the Targutai appeared on the horizon, Genghis Khan sent all his men directly into the center phalanx, shooting a volley of arrows as they rode. The

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center scattered, and Genghis Khan's men wheeled to the right and left and attacked both *wings* from the rear.

In another battle, a part of the clan was hunting when, toward evening, an advance lookout warned that the enemy was preparing a night attack. Genghis Khan quickly sent the women and children back to the main camp and scattered the livestock as he and his men retreated to wait in some nearby hills. They left the yurts and a few men to keep the fires burning so that it looked as if the camp were occupied. The enemy shot the yurts with arrows, and when they found them empty, they assumed the people had panicked and fled. They gave chase, arriving at the place that Genghis Khan had chosen for battle, but their horses were worn out. Genghis Khan sent one of his commanders up on a small hill with his standard. The enemy charged, expecting the leader to be at the same place as his standard, and the main body of Mongols executed their *tactic* of sweeping around the *flank* for an attack from the rear.

After breaking the armed power of a people, Genghis Khan located and then killed all the members of the ruling family. The remainder of the fighting men were divided among the clans loyal to him; women were given to his warriors; children were taken into Mongol families; and grazing lands and herds were divided among the warriors.

These tactics--fast, mounted attacks; surprise and evasion; the sweep to the rear and encirclement; retreating to lead the enemy into ground favorable for the Mongols' tactics and in the meantime exhausting them; and mass destruction once the battle was won--made up the standard nomadic style of fighting, which the Mongols improved upon. One additional factor which made the Mongols unstoppable was that they never retreated unless it was a tactical retreat. They simply did not stop attacking once they began.

Expansion

After Temujin was elected sole leader of the united tribes, he got them to stop fighting each other and start fighting everyone else. Although he had never seen a fortified city, Genghis Khan decided to lead his 135,000 men[2] against the Sung empire of northern China. He had no *siege* machinery (weapons and equipment made especially for sieges) of course, but used trickery to lure the defenders from their forts. The Chinese, who had discovered gunpowder, had more advanced weapons in addition to their walled defenses. They had a crude gun which hurled metal pellets, as well as a *catapult* which fired primitive bombs. The Mongols captured many of these weapons.

Because the Mongols' numbers were so few, Genghis Khan was at first unable to figure out how to hold the territory he had conquered. His eventual solution was to take what he could use and to destroy everything else. From China he took healers, soldiers forcibly recruited from the vanquished armies, all the loot his men could carry, and a few people who could write. He also took siege machinery (used later against the Moslems and in Europe), and men expert in its use. He made an ally of one feudal lord whom he left in power to administrate the area. Everyone else he killed, in effect depopulating northern China to open new lands for his people.[3] Even after Genghis Khan's death, the Mongols repeated this pattern as they subdued other lands: taking *conscripts* forcibly into their army, dividing them up and putting them under the command of Mongol officers; leaving cooperative natives in control, or more often, putting relatives or trusted officers in charge; and destroying useless or troublesome people. After conquering northern China, Genghis Khan turned to the Moslem world south of the great mountain chain that separated the Central Asians from Islam. At the center of the Islamic world was a war lord, Muhammed Shah of Khwarezm, who believed that God would not allow Genghis Khan to defeat the Moslems because he was an infidel.[4] By the time the Mongols finished their campaign two years later, the Moslems thought of the Mongols as a scourge sent by God to punish them for their sins. Like the Chinese before him, the Shah had underestimated these strange, fur-clad little men on their scruffy ponies. The Mongols army split in two, one crossing the mountains in Afghanistan in the north and the other heading south. This way they could attack from two directions.

In the first battle, the Shah's men attempted to chase down the Mongols, but their armored horsemen were too heavy and slowed the horses. The Mongol riders kept just ahead of them, destroying the grain fields as they went. The Moslems could not keep pace, and could not even feed their own horses. The Shah's forces withdrew. By the end of the campaign, the Mongols had massacred everyone they couldn't use; in addition, they had destroyed all the buildings and all the food so that anyone who had managed to hide starved to death. This method of total devastation was the model for the "scorched earth" tactic that General Sherman used during the US Civil War in the 1860s.

While the army under the command of Genghis Khan continued to fight in Persia, Afghanistan, Iraq, and part of India, the southern army turned west into Russian Georgia. It was crossing the Dnieper River into Europe when the summons came to attend a council of all Mongol chiefs. The army withdrew, but the invasion of Europe was only postponed.

Organization and Law

The *logistics* of large-scale, nomadic invasions were formidable and demanded efficiency in management. Because they depended on horses and did not carry grain feed with them, the Mongols had to be certain they would have adequate grazing and water supplies along the invasion trail. They had to plan in advance for weather, allow time for their horses to graze, and still reach the chosen battleground at the right time. (Years later in Syria, the arid countryside caused them to lose battles and territory.)[4] Frequently, Mongol families traveled with the troops, herding food animals. Although these families remained well behind the lines during combat, their needs also had to be calculated and planned for. When the Mongol troops wanted to move quickly, they carried dried food supplies, and left the families and herds behind. With their families along, troops could only travel about four miles a day; without them, on suitable terrain, they could travel as much as 80 miles in one day if necessary.

Genghis Khan ruled his entire empire through a system of rewards and punishments. To keep control over such vast territories, he needed a communications system and a set of laws designed to keep down rebellion. The law, or Yassa, was read aloud to his illiterate people and was strictly and fairly enforced. It included rewards for loyalty and success, and only one punishment, death, for breaking the law and for failure. The Yassa included these laws:

- Horse thieves, spies, and adulteresses were punished by execution.

- There was only one god in heaven and only one Khan, elected by the General Council of the Mongols.

- Religious leaders were not to be taxed or interfered with in the performance of their duties. (The Mongols tolerated all religions. In the army were Moslems, Christians, Buddhists, and Shamanists.)

- Every man was required to serve in the army. Warriors were forbidden to leave a battle, forbidden to retreat until commanded, and forbidden to leave the wounded behind. They were likewise forbidden to steal valuables from the enemy until given permission by an officer. Although Mongol soldiers were not paid, they were entitled to keep the booty (valuables) that they carried off.

- Women were charged with buying and selling property. Men were to hunt and fight.

- Officers had to attend the General Council every spring, held wherever Ghenghis Khan was. The penalty for missing the Council was death. (One incident shows how seriously attendance at the Council was considered. When troops crossing the Dnieper River were called back, they abandoned the attack and rode 2,000 miles to the Council. The invasion of Europe was postponed until those same forces could retrace the 2,000 miles they had traveled.)

Two kinds of communication were required to keep this empire under central control: battlefield communication and governmental communication.

To carry out surprise attacks, the Mongols learned to move their horses quietly and devised a silent code so they would not have to communicate by voice. Other armies sent runners or horsemen with messages; the Mongols simply waved their standards. Officers watched for these signals and then directed the troops by arm movement by day, or by lantern at night. The enemy was frequently unaware of their approach until it was too late, and when the Mongols retreated, they seemed to vanish.

To communicate with the central council back in the Gobi desert from where the empire was administered, Genghis Khan set up a pony express with posts along the route where guards kept fresh horses. Messengers rode at least 50 miles a day, and sometimes covered 150 miles by using torches at night. The roads had governors and clerks who kept track of travelers and merchandise, and who recorded when *couriers* arrived and left. Soon after these post roads were established, caravans of loot from conquered lands were being taken back along them to central Asia.

It is recorded that near the end of his life, Genghis Khan wondered aloud to one of his Islamic advisors if the blood he had shed would be remembered against him by mankind. Earlier he had told one of his officers his own version of the greatest happiness: "To crush your enemies, to see them fall at your feet--to take their horses and goods and hear the lamentations of their women. That is the best."[7] It is estimated that the Mongols massacred 40 million in Central China; and in Iraq, they killed so many in the two years of their campaign that the population did not recover its numbers until the beginning of this century.[8]

The blood Genghis Khan shed *is* remembered against him by mankind. His name is invoked with the wondering revulsion reserved for the handful of leaders who practiced *genocide.*

Presentation Guidelines

1. Try to include the following points in your presentation:

    - the importance of the stirrup and horsemanship to Mongol war tactics
    - the strategy of "total devastation" which was employed against the citizens of the enemy country
    - illustrate some of the tactics used by Gengis Khan on the chalkboard three of the handout)

2. Try to answer the following questions in your presentation:

    a) Can you give examples which show that war involved the whole of Mongolian society, and not just the soldiers?
    b) What were the goals and targets of Mongolian attacks?

FOOTNOTES

[1] Some scholars attribute the invention of the stirrup to the Chinese in the fourth century A.D.; others argue that it was first developed in the seventh century.

[2] "Mongol Manpower and Persian Population," J.M. Smith, in Journal of the Social and Economic History of the Orient, Vol. 18, Part III (1975), p. 273.

[3] War, Gwynne Dyer, 1985. Crown Publishers, New York, NY, p. 46, and op cit, Smith, p. 291.

[4] Genghis Khan: The Emperor of All Men, Harold Lamb, 1927. Garden City Publishing Company, Inc., Garden City, NY, p. 123.

[5] "ʿAyn Jalut: Mamluk Success or Mongol Failure?" J.M. Smith, Jr., in Harvard Journal of Asiatic Studies, Vol. 44 (1984), pp. 338-343.

[6] Ibid., p. 335.

[7] Lamb, p. 107.

[8] Dyer, p. 46.

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The Hundred Years' War:
The Battle of Crécy

On August 26, 1346, an army of about 11,000 English *knights*, foot soldiers, and *archers* led by King Edward III marched into the rolling hills outside the village of Crécy in northern France.[1] Only two days before, they had crossed the river Somme in a hurried retreat from the advancing armies of the French king, Philip VI. Edward was now a half-day's distance from the pursuing French, and felt secure enough to take up a defensive position in the foothills near Crécy. There his archers, over half of his forces, could be used to the greatest advantage.

Aside from the 6,000 or so archers in his command, Edward also had with him over 3,000 light foot soldiers (most of them Welsh spearmen) and almost 2,000 *armored men-at-arms*. As they awaited the arrival of the French, Edward's troops secured their position on top of a hill. The king divided them into three groups, called "battles," placing the majority of his archers along the front and calling for his armored knights to dismount and stand behind them. Edward himself took up post inside a windmill behind the first English line, where he could best view the action on the ground and give orders accordingly. The archers were equipped with *longbows* which stood as tall as a man and were lethal at a distance of 400 yards. Preparing to stand their ground as long as they could, these longbowmen dug holes in front of their lines to protect themselves from the charges of the French *cavalry* when they came. The horses would stumble, it was hoped, and fall when the French cavalry stormed up the hillside at Crécy. If the French horsemen ever penetrated the front line of archers, the knights would engage them in hand-to-hand combat, fighting with swords or hand axes in the traditional manner of war.

Meanwhile, the armies of the French king had no idea that the English had halted their retreat and taken up position in the hills near the town. Although King Philip's army was at least three times the size of the English force, it was spread out along ten to twelve miles of road, and was severely lacking in discipline. The 12,000 mounted knights and 10,000 foot soldiers and their feudal lords straggled across the countryside near Crécy, accompanied by 6,000 hired archers. These hired soldiers, or *mercenaries*, came from the city of Genoa in Italy, and were celebrated for their skill with the *crossbow*. Though the crossbow was a powerful bow that had been used since the tenth century, it was much slower than the newly-developed longbow. The crossbow operated by means of a hand crank which pulled the bowstring back far enough that a special arrow, called a "bolt", could be loaded. This process of cranking and loading was quite time-consuming for an archer in the front lines of a battle; in the same amount of time that he could load and fire one crossbow bolt, four shots could be fired at him from an enemy longbow.

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Not only were the Genoese mercenaries the best-trained crossbowmen in Europe but they were the most disciplined as well. The rest of the French army made its way to Crécy in complete disorder. When Philip, near the center of the mass, first received word that Edward and his men were waiting for him only a few miles down the road, he tried to stop his own army's advance and organize them for battle.

But King Philip was unable to keep his own lords in check. Their loyalty to the king was limited by their own pride and sense of power. According to one French historian named Froissart, "none of them would turn back, for each wished to be first in the field.... Those behind them kept riding forward, and would not stop, saying that they would get as far to the front as their fellows, and that from mere pride and jealousy."[2] The mass of troops did not stop until they had seen the English for themselves. Philip gradually made his way to the front, but by the time he arrived, it was too late. His soldiers had marched too far to be drawn back in time. The battle could not be delayed.

It was already evening when the king of France gave the order for the Genoese crossbowmen to prepare for the first attack. As they moved forward through the flood of infantry and heavily-armored cavalry, a sudden rain drenched the soldiers on both sides. In a matter of minutes, the storm had passed, and the sun shone brightly into the eyes of the French. Almost immediately, the crossbowmen began their short march into the valley that separated them from the enemy. They advanced down the hillside, shouting in defiance at the English, and stopped at the foot of the opposite slope, just within range. Rain-soaked and squinting in the bright sunlight, the crossbowmen took aim at the first line of English archers up the hill, and fired. The battle had begun.

The English longbowmen responded with a rain of arrows so dense that Froissart said it looked "like snow" upon the heads of the unfortunate Genoese. The first lines fell, as the English let fly arrow after arrow. While the Genoese were busy with the work of reloading and cranking their crossbows for a second round of fire, the English, with their lighter longbows and a continuous supply of arrows, were able to fire without interruption. The losses were heavy. Chaos soon broke the ranks of the mercenary crossbowmen, and they scrambled back up the slope behind them.

The mounted French knights who stood waiting up the slope did not immediately understand the threat that had faced the Genoese archers in the valley. Angered by what they saw as cowardice on the part of their mercenaries, a group of knights led by the Count d'Alencon charged down the hillside. "Away with these faint-hearted rabble! ...they do but block our advance,"[3] the Count yelled, racing down into the valley and crashing into the mob of fleeing Genoese. The knights even drew their swords against their own mercenaries in order to clear a path to the front. Nevertheless, the cavalry charge was fatally slowed to a halt at the bottom of the valley--just as the English archers once again took aim.

This time the English aim was even more deadly. The longbowmen stopped the French cavalry in its tracks, still a good distance away from the first line of the English defenses. One historian wrote, "every arrow told on horse or man, piercing head, or arm, or leg among the riders and sending the horses mad. So the knights in the first French battle fell, slain or sore stricken, almost without seeing the men who slew them."[4] Many of the knights, in their heavy *plate armor*, were trampled on the ground by their own horses, unable to get up once they had been thrown. With every charge of the French cavalry, the result was the same. The battle continued until midnight with the English line virtually unbroken, and the longbowmen still in place.

After sixteen or so disordered charges of the French cavalry, the battle was over. The French had suffered incredible losses. It was estimated that over 1,500 knights and noblemen had fallen in the battle, and at least 10,000 of those "not of gentle blood" had perished as well. The English had scarcely been touched: only two knights, one squire, and 40 men-at-arms and archers had been slain. The steadiness of the longbowmen supported by the dismounted knights in their ranks had paid off. King Edward had won.[5]

The battle of Crécy in 1346 marked the most significant battle in the long series of armed conflicts between England and France that came to be known as the Hundred Years' War. Six years earlier, Edward III had invaded France to claim the throne from his cousin, Philip VI. He had led an army of fifteen thousand through northeastern France and Normandy to the walls of Paris, burning and looting villages along the way. His men conducted a war of devastation, or pure destruction, that would set the tone for the next hundred years. They lived off the land they destroyed, stealing farm animals and burning the crops they did not need. They fought a war against the citizens as well as the soldiers. And, unlike the fighting men of the early Middle Ages, they fought both for plunder *and* for pay.
Most of the soldiers in the Hundred Years' War were paid natives, but many were mercenaries. These "freelance" soldiers, like the Genoese at Crécy, served as soldiers in the army of whichever king was willing to pay them the most. They made war their occupation, and when there was none, they roamed the countryside in bands, called "companies," looting and pillaging while they looked for work. Mercenaries were both nobles and commoners, drawn together by interest in fighting or in good wages. In battle, the knight and the peasant were no longer distinguished by their social classes alone. They were both soldiers and, by the fifteenth century, infantry men. In this way, the mercenary companies of the Hundred Years' War gave rise to a new era of equality on the battlefield.

With the introduction of the longbow in the thirteenth century, the distinction between infantry and cavalry also became less important. As the battle of Crécy proved, the mounted knight, who had dominated warfare since the early Middle Ages, could be overpowered by the archer. Even dismounted, the knight was a vulnerable target. Wearing extremely heavy and restrictive armor, or "plate mail," he was unable to fight effectively against a foot soldier more lightly armed and armored. And once knocked to the ground, there was little chance a knight would be able to set himself back on his feet. The fighting man on horseback had become useless against the well-trained longbowman or infantry spearsman.

Another technological development which greatly affected the nature of warfare after Crécy was the use of gunpowder and, in particular, the *cannon.* As early as 1339, soldiers in Edward III's army employed a primitive version of the shotgun, called a "ribauldequin," a bundle of metal tubes lashed together which was designed to fire several bullets at one time. In the fourteenth century, short-barreled cannons called "bombards" were used as terror weapons or as battering weapons during the siege of a castle. No medieval fortification was safe against the explosive power of the cannon. Several of these small bombards, made of wooden splints and iron hoops, may have been used during the battle of Crécy.

To the people of western Europe during the Hundred Years' War, these weapons which used gunpowder were both immoral and inhumane. They had a disastrous, ugly effect on the human body, and they degraded the status of the noble-born knight. The development of the hand-held gun made the knight vulnerable to attack by the lowest of men. On the battlefield, everyone was equal. The "beauty" and the "chivalry" of war seemed to have disappeared. In fact, the nature of warfare *had* fundamentally changed; the longbow at Crécy and the gunpowder to follow would bring the infantryman to the top of the hill for the next five hundred years.

Presentation Guidelines

1. Try to include the following points in your presentation:

    - one reason the longbow was technologically superior to the crossbow because it took less time to load
    - with the use of the longbow in battle, the knight lost his special position: he was as easily killed as the infantrymen
    - once unhorsed, the knight was easy prey even for the mercenary soldier--he simply wasn't able to move around

2. Try to answer the following questions in your presentation:

    a) What was one of the complaints about gunpowder, and its effect on warfare? (see the last paragraph of the handout)
    b) What roles do you think prestige and social honor played in the warfare of this time period? Why might this be important to think about?

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FOOTNOTES

[1] The figures for the size of the English and French armies are taken from A History of the Art of War in the Middle Ages, by C.W.C. Oman, and are based on estimates of troop sizes from several eyewitness accounts.

[2] From A History of the Art of War in the Middle Ages, C.W.C. Oman, p. 139. Much of the detailed description is taken from the works of the 15th century historian, Froissart, who was not an eyewitness to the battle at Crécy. Froissart's account, however, is generally considered the most vivid and most descriptive.

[3] Ibid., p. 142.

[4] Ibid., p. 143.

[5] Casualty numbers are also rough estimates (see footnote 1).

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World War I

Origins of the War

In the late 1800s and early 1900s, there were five European *empires* which dominated the world: Germany, France, Great Britain, Austria-Hungary, and Russia. Each of these *nations* competed for raw materials and markets to support their growing industries. (The Industrial Revolution which took place in European countries during the late 1800s and early 1900s had a huge impact on their economies and their need for raw materials.) Beyond this competition, the European nations also rivaled each other for colonial influence in other parts of the world.

During this time Germany developed the strongest army on the European continent. Britain, the most "advanced" of the European nations, considered Germany a threat to its economic and military (especially naval) power. Germany's impressive rise to power made many European leaders uneasy, for they feared that German strength would disrupt the careful balance which had been established between the European nations.

In addition to the tension with Germany, other problems were beginning to surface. Some ethnic groups, especially the Slavs, wanted independence from the Austro-Hungarian Empire. Serbia, a small nation in present-day Yugoslavia, became the center of a movement to unite the Slavs in one nation dominated by the Serbs. This goal was unacceptable to Austria-Hungary which wanted to control the entire Balkan region and obtain access to the Aegean Sea. The Russians wanted to prevent Austrian expansion. They too wanted access to the Aegean and to the Mediterranean as well. Russia regarded itself as the guardian of other Slavic peoples, and encouraged the Serbians to form an independent Slavic state.

The five Great Powers believed that military power was the prime measure of a nation's strength, and that force could be used to gain their objectives. "No nation felt it could allow a rival to gain an advantage.... The outcome was an expansion of each nation's armed forces and increased tensions."[1] Without being aware of its consequences, Europe's nations were preparing for war. What these rivals did not yet know was how the industrial revolution, and technology especially, would change the manner in which wars were fought. They in fact still believed very strongly that the most certain way to ensure victory in war was to fight offensively: to attack with great speed and surprise so that the enemy would not have time to gather up its forces.

The combination of nationalism and strong faith in offensive military strategies created a false impression of war. Proud of their growing might, Europeans looked at the rivalries as a test of their strength. "Attack is the

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best defense," said Germany's General Alfred von Schlieffen. The French and British agreed: "The offensive alone is suited to the temperament of the French soldiers."[2] "The defensive is never an acceptable role to the Briton, and he makes little or no study of it."[3] Even Belgium, a weak nation when placed aside its neighbors, favored the offensive: "To ensure against our being ignored it was essential that we should attack."[4] Smaller nations or nationalist movements--such as the Slavs in Serbia--were quickly lost in this battle for pride and power.

The Alliance Systems

Instability increased with the establishment of two *alliance* systems, the *Triple Alliance* and the *Triple Entente.* The Triple Alliance was formed when Germany signed a defensive alliance with Austria in 1879, hoping to isolate France and end Russian expansion. Italy's membership in 1882 made the alliance complete.

France and Russia signed a defensive alliance in 1894, agreeing to provide military support to each other in case either was attacked by Germany. By 1907 Britain had resolved its colonial disputes with France and Russia, and the three countries entered into a diplomatic understanding known as the Triple Entente. By joining an alliance, each nation was making a commitment to the defense of its *allies.* The division of Europe into two rival groups, combined with aggressive attitudes towards war, led many people believed that a continental war was indeed inevitable.

Austria had occupied Bosnia (in present-day Yugoslavia) since 1878. In a secret agreement with Russia in 1908, Austria said it would call for an international conference at which it would support opening waterways to Russia if Russia, in exchange, allowed Austria to *annex* Bosnia. Without waiting for the conference, Austria annexed Bosnia. Russia faced a difficult decision. Austria had now disrupted the Slavic hope of unification, and Russia felt obligated to respond in some way. Ultimately, Russia chose not to initiate a confrontation.

On June 28, 1914, Archduke Francis Ferdinand, the heir to the Austrian throne, and his wife were assassinated in the capitol city of Bosnia by a Serbian nationalist. Austria, which wanted to punish Serbia and believed a war was necessary to end the Slavic demands for independence, made a number of demands to the Serbian government. All but one of the demands were accepted by Serbia.

Germany soon announced its unconditional support for Austria, believing that since Russia had not aided its allies in earlier crises, it would not aid Serbia. Germany believed that the Triple Entente powers would not or could not unite to fight against Austria merely to "save" Serbia. Britain and Italy announced that they would remain *neutral.* At this point, "having unleashed Austria to make war against Serbia, the Germans could no longer control their ally."[5] The Austrians *declared war* on Serbia on July 28.

Mobilization

On the following day, the Russian Czar informed Germany that Russia would mobilize its armies if the German Kaiser did not work with him in seeking to avoid a war. The Russians believed that if Austria won the war, Russian influence in the Balkans would end and Austrian power would increase. Britain announced that it would not remain neutral if France became involved in a war against Germany. The Germans, now facing a major war, had second thoughts, but the Austrians were already starting their attack against the Serbs.

Despite Germany's threat that the *mobilization* of Russian troops would force Germany to enter the war, the Czar announced mobilization on July 31. Russia still believed that France would honor its past agreement on military support. Aware of the risk neighboring Germany posed to its security, France pressured Russia to launch a major attack against Germany in order to divert Germany aggression from France. Germany left Russia no time, and declared war on Russia on August 1 and on France on August 3. French mobilization began on the day of the German attack.

In order to implement its plan to defeat France before Russia, Germany invaded France through Belgium and Luxembourg on August 4. Belgium's neutrality had been guaranteed by all European nations since 1839, and this invasion convinced Britain that Germany would annex both Holland and the Scandinavian nations if allowed. Britain too entered the war.

On August 4, the US declared its neutrality, believing the war was no threat to its security. President Wilson demanded that the warring countries respect US rights to trade freely. "Wilson and the American people...did not understand the impact of technology and industrialization of the past fifty years upon warfare. Few people perceived that a new warfare, that of *total war* in which civilians and all trade goods were vital cogs in a nation's war machine and thus subject to attack, had appeared and that within this framework of modern war the rights of neutrals...were outdated."[6]

Even as an officially neutral nation, the US was threatened by the German navy, which suspected that US ships were delivering supplies to Great Britain. Germany rejected American claims to neutrality, and commanded its submarines to attack US and British merchant ships. After a US passenger ship was sunk by a German *submarine* (resulting in the loss of civilian lives), US public opinion shifted in favor of the US entering the war. Though it seemed clear that the US would join the Entente, it had never looked very favorably on Russia's Czarist form of government. When the czarist regime in Russia fell to republican revolutionaries in March 1917 (the beginning of the Russian Revolution), Wilson identified with the democratic aims of the Entente.[7] Wilson called Congress into a special session on April 2, 1917, to request a declaration of war against Germany. The US entered the war four days later on the side of the Triple Entente.

Science, Technology, and Weapons

During World War I, science and industry were more involved in the technology of war than ever before; teams of scientists took on military projects. *Machine guns* and *artillery* weapons were made more accurate and powerful. Railroads were reinforced. Transportation was motorized. The telephone and wireless communication were invented, improved upon, and brought into wide use. But perhaps the most important technological innovations of this time period were the airplane, the *tank*, poison gas, and the submarine.

Airplane: The invention of the airplane was the work of a number of separate scientists and inventors, including Isaac Newton, Samuel Langley, and Wilbur and Orville Wright. In the early 1900s, the design and production of airplanes accelerated. They were first used in war in the Italian Tripoli campaign (1911-1912). When World War I first broke out, Germany had 200 planes, twice as many as France or Great Britain. Military officials on either side seemed to have little understanding of the variety of uses for the airplane; it was initially used in *reconnaissance*. When these reconnaissance planes became targets they were armed with machine guns and made for greater speed. Each country began working to achieve superiority in airplane speed, firepower, and maneuverability.

Bombs--which could be dropped on cities, railroad stations, and airfields--were first carried on zeppelins (or blimps) and later on planes. As there were no *aircraft carriers* (ships that have a large deck where planes can land and take off), airplanes were not used very effectively at sea.

Submarine: The submarine was not new to war, but its effectiveness was significantly greater. France, Great Britain, the United States, and Germany were all building submarines and *torpedoes* in the early 1900s. A variety of anti-submarine measures were taken: organizing ships into escorted *convoys*, the use of the hydrophone (which could detect submarines), the *depth* bomb (an explosive dropped from a ship in the sea), and the underwater *mine*. Airplanes were often used to locate submarines near the coastline; a special type of *aerial* bomb was invented for use against submarines.

Land: As the *machine gun* came into wide use, the *rifle* and *bayonet* became less important. Germany had produced some advances in *field artillery*; one weapon could hurl a 250 pound shell 75 miles. Artillery generally fired high-explosive shells which scattered lethal fragments after exploding. (Much of the transport work of artillery on the battlefield was still done by horses and men.) The use of barbed wire and the machine gun to protect the trenches turned the land war into a defensive stalemate; neither side could move forward without massive *casualties*. Some historians argue that this stalemate in the fighting on land caused scientists and inventors to develop a new weapon which would overcome this stalemate. "None of these (new weapons) did anything to the tactical or strategic picture except to increase the efficiency of the slaughter."[8] This was certainly true when both sides had modern equipment. The smaller or less advanced countries (Russia, for example) were, however, disadvantaged by their lack of technology. It was unreasonable to expect horses and carriage-drawn artillery to compete with tanks and armed motor vehicles. Armies lacking in technology had to compensate by increasing the size of their armed forces.

Chemical Weapons: One attempt to overcome this land stalemate was the German development of materials for a chlorine-gas attack. Protected by recently designed gas masks, Germans launched their first gas attack in 1915. (Note that this was not the first modern use of gas as a weapon of war. The first use may have been in Sweden in 1701.) Thereafter, various kinds of gases were used by both sides until the end of the war. The chemicals were horrific and agonizing in their effect on individual soldiers, but were risky military weapons, since winds made them unreliable.

Tanks: The development of the tank did not depend on new scientific ideas or radically new technology, yet it greatly changed land warfare and helped bring an end to the land stalemate. Perhaps the first significant use of the tank in warfare was in 1917 by the British. Although it gave them only a slight advantage in this war, the British were the main developers of tanks; only 45 German tanks were ever used.

Strategy and Tactics

World War I was begun without an understanding of the kind of war it would turn out to be: "Both sides anticipated a quick victory in August, 1914."[9] Young British men went eagerly into the army, actually afraid the war would be over before they could get into it.

The French-Russian strategy was to launch two simultaneous offensives; the French would attack the German-French border in the southeast, while the Russians would attack on the Polish-German border to the northeast, requiring the Germans to fight a war on two *fronts*.

The German strategy was to advance on the French through Belgium, pass around Paris, and attack them from the rear, while another German army attacked from the front. The Germans expected France to surrender quickly so that the German army could be moved east to counter the Russian offensive.

The German offensive successfully secured the surrender of Russian troops in August. At the same time, the French offensive in the south failed. The German command, however, made a fatal mistake and passed east of Paris, giving the French a chance for a successful counterattack. Thus began the five-day Battle of the Marne, after which both sides moved speedily to try to take control of ports on the French seacoast. By December both armies had established a network of defensive *trenches*--the Western Front--which eventually stretched from the English Channel to Switzerland. The rest of

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the war was fought from these trenches, a stalemate from the time both armies set up their lines of defense.

The *trench warfare* in this war was "a revolution in military affairs."[10] It was a new kind of war, demanding different weapons and battle tactics than those used in preceding European wars. After the invention of the *musket*, armies had met on open fields where opposing closely-packed ranks of musketeers fired at each other, or *cavalry* fought hand-to-hand with swords and pistols. The *rifles* and machine guns of WWI mowed down men and horses indiscriminately. Within the first two months of of the war, over two million men were dead.[11]

A frontal attack was mass suicide, as was shown by the British offensive at the Battle of the Somme in 1916. The British bombarded the German trenches with cannon for seven days, desperate to break the stalemate, and on July 1, sent waves of *infantry* through barbed wire defenses against the German machine guns. At the end of the day, 60,000 British lay dead or wounded. They continued the attack until heavy October rains made it impossible to continue. The British alone suffered 400,000 casualties in this battle.[12] Neither army could pass through or around the other's trenches, even though they were only a few hundred yards apart. "Instead of fighting a battle on one or two days of the year [as in previous wars], they were in the field...all the time."[13] Soldiers lived in these trenches for months on end under constant artillery shelling, unable to break through enemy lines. "For over three years, no offensive succeeded in budging the Western Front as much as ten miles."[14] There could be no real strategy (movement of troops) in this war, and the tactics consisted of more and heavier *bombardments*. Armies used poison gas in the trenches, where firepower seemed less effective. It seemed that winning the war was a simple matter of having more men and outlasting the enemy.

A Total War

Many historians describe World War I as the first total war because it involved the direct participation of the civilians of the major nations involved in the war. (Others consider the US Civil War as the first total war.) "For the first time in history, governments sought to bring total control and direction to the physical and emotional energies of their civilian populations and to their nations' economies."[15] In the US, for example, civilian industry was converted to war uses: radiator factories made guns and piano factories made airplane wings. *Conscription* (enrollment into military service by a draft) was adopted, and the military services began training millions of civilians. Civilian consumption of consumer products was cut in order to use the resources on military products.

Most people were not aware of the events which inflated the prewar crises. All governments charged their enemies with starting the war. "In Allied countries the Kaiser (of Germany) was portrayed as a demon. In Germany people were taught to...hate England as the...enemy which inhumanly starved little children with its blockade (of Germany)."[16] Government *propaganda* served to inflame public opinion and sustain the public for the struggle.

By the time the war ended in November 1918, almost 10 million people had been killed and 20 million wounded.[17]

Limits to War

After the wars of the mid-nineteenth century, attempts were made both to prevent war and make the conduct of war more humane. The *International Red Cross* Society was founded in 1859. International conferences in *the Hague* (1899 and 1907) and in *Geneva* (1929 and 1949) were held to provide for the regulation of the treatment of civilians, the wounded, and prisoners of war. Regulations of the lethality of the weapons used in war were also signed.

One rule of international law, which Germany was accused of breaking during World War I,[18] was the rule against forcing prisoners of war to work.

Another *code of conduct* violated during World War I concerned submarine warfare: a submarine had to surface to see that all sailors on a ship under attack were in lifeboats before the ship could actually be sunk. The Prize Law, agreed to in the age of wind-powered (sail) boats, was also ignored during World War I. It required that if a vessel were suspected of carrying illegal materials, it could be searched and taken to the nearest port where a Prize Court would make a ruling. For submarines to surface would have made them vulnerable to attack, so they did not observe the rule.

After World War I, there were some attempts to prevent or limit future wars. For example, the *Kellogg-Briand Pact* was signed in August 1928; the signatories committed themselves to a total renunciation of war as an instrument of national policy.

Presentation Guidelines

1. Try to include the following points in your presentation:

   - the First World War was fought between nations allied amongst themselves, and which took sides against each other according to the alliances they belonged to
   - the nations which fought this war were supported by the nationalist feelings of their peoples
   - some of the technology available for war during the years of this war had never been used before (barbed wire, airplanes, massive artillery), and never before had a country's entire economy been switched over to the production of weapons

2. Try to answer the following questions in your presentation:

    a) What impact did trench warfare have on the strategies and technologies of this war? Look at the kinds of weapons which were or were not used to fight the war at the front.

    b) What did it mean for a nation's people, culture, economy, and politics to become completely involved in a war? Do you see any similarities or differences with the wars fought during the Stone Age, the Mongol empire, or the Middle Ages?

FOOTNOTES

[1] America Challenged 1916-1945, Kenneth S. Mackenzie, 1983. Independent School Press, Wellesley Hills, MA, p. 4.

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[3] Ibid., p. 60.

[4] Ibid., p. 61.

[5] A History of the Modern World, sixth edition, R.R. Palmer and Joel Colton, 1984. Alfred A. Knopf, Inc., New York City, NY, p. 666.

[6] Mackenzie, p. 6.

[7] Ibid., p. 19.

[8] From Crossbow to H-Bomb, revised edition, Bernard and Fawn Brodie, 1973. Indiana University, Bloomington, IN, p. 193.

[9] Civilization Past and Present, T. Walter Wallbank, Vol. II, 1949. Scott, Foresman and Company, New York City, NY, p. 380.

[10] War, Gwynne Dwyer, p. 80.

[11] Ibid., p. 80.

[12] Wallbank, p. 82.

[13] Dyer, p. 81.

[14] Ibid., p. 82.

[15] Mackenzie, p. 55.

[16] Palmer and Colton, pp. 686-687.

[17] Ibid., p. 681.

[18] Ibid., p. 684.

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World War II: Global Warfare

The human and economic carnage of WWI left Europeans and the US determined that it would be "the war to end all war." Nevertheless, in the twenty-one years between the signing of the *armistice* in November, 1918, and the *declaration* of war in 1939, *nations* continued to prepare for the next war: *alliances* were formed, rules concerning the conduct of warfare were revised, and weapons were improved.

German Expansion

In Germany, unfamiliarity with the system of parliamentary, constitutional democracy created a chaotic political life which Adolf Hitler's *Nazi* party was able to dominate. A powerful speaker, Hitler exploited Germany's economic troubles and its deep resentment of the victors of WWI who, through the *League of Nations* and the *Treaty of Versailles*, had assumed ownership of many German border territories and overseas colonies after the war. In 1933, Hitler's fascist party took control of the Reichstag (German parliament). In 1936, he moved troops and arms into the Rhineland, the region between France and Germany which had been declared a *demilitarized zone.* Though this clearly violated the Treaty of Versailles, Germany was not asked to withdraw. Hitler's Germany *annexed* Austria next, in 1938, and followed with a military takeover of Czechoslovakia. Other nations complained, but were unable to agree on direct action against Germany. France and Britain began to prepare for war.

In 1939, Germany and the Soviet Union signed a pact of mutual non-aggression which allowed Germany to invade Poland and the Soviet Union to take Finland, Latvia, Estonia, and Lithuania. France and Britain finally declared war against Germany on September 3, 1939. In 1940, France, Luxembourg, Holland, Belgium, Denmark, and Norway fell to the German army. The policy of *"appeasement"* which had failed to stop Hitler's expansion in its early stages has haunted governments ever since.

The Axis

Other political realities made it possible for this initial conflict to grow into a *global war.* In Spain, a civil war brought the *fascists* to power (aided by Hitler) under the dictator Francisco Franco in 1939. Italy's fascist *dictator*, Benito Mussolini, came to power in 1922 and invaded Abbysinia in northern Africa in 1935, and then Greece, Yugoslavia, and Egypt in 1940. Japan, an industrialized nation with no natural resources but with a strong, westernized military, successfully invaded Manchuria in 1931 and China in

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1937. Germany, Italy, and Japan, all seeking to expand their territory, formed an alliance known as the *Axis*. They were opposed by France and Britain, and later the US and the USSR, who joined together as the *Allies*. The Allies cooperated militarily with each other in the war, but the Axis did not; each Axis ally fought its own separate war with the Allies.

The Allies

Both Britain and France had extensive colonial or *commonwealth* ties (in the Middle East, Africa, Asia, the South Pacific and North America) which could supply their "mother" countries in Europe with troops and valuable raw materials. This made them vulnerable targets for Axis aggression.

From 1939 to 1941, the US was split between two strong opinions about the new war in Europe. Many people had fresh memories of the First World War, and believed that this war was not a concern of the US. Others, including many US government officials, believed that modern technology made isolation from the war impossible and that US national security would require resistance to the Axis powers sooner or later. When France fell in 1940, leaving the British alone to hold out against Germany, many believed that Britain was sure to lose the war. This possibility did not appeal to the US, and to support Britain without actually going to war, the US supplied warships, food, and war *materiel*.

On December 7, 1941, the Japanese launched a surprise air attack on the US fleet stationed in Pearl Harbor, Hawaii, destroying most of the ships and airplanes kept there. After Pearl Harbor, public opinion shifted dramatically and the US officially declared war against Japan on December 8. Three days later, Germany declared war on the US. The US rapidly changed to a war economy to replace the resources lost in the surprise attack, but "for six months after Pearl Harbor, Japanese forces [ran] rampant in the Pacific and Southeast Asia, overwhelming the European colonial empires, encircling China from the south, and threatening India, Australia, and Hawaii."[1]

The year 1941 also saw Germany conquer Yugoslavia and Greece, and invade the Soviet Union (against the rules of the non-agression pact). The German invasion of the USSR and the Japanese invasions in the South Pacific and Asia marked the beginning of the first, and so far the only, *global war*.

The Continuous Front

Primitive tanks, airplanes, and submarines used in WWI had shown their potential, and in WWII the German invasion of France owed much of its success to *tactics* which combined the use of planes and tanks.

It is a military cliché that generals always prepare to restage the last war; the French and British anticipated fighting in the same way they had fought 20 years earlier. The *Maginot Line*, a line of fortified *bunkers* stretching from

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across the eastern border of France, was intended to serve as the line of *trenches* used in WWI. But rather than launching an *infantry* assault as they had in 1914, the Germans first sent planes on bombing runs and then followed with large, fast-moving tank forces which swept around the Maginot Line through Belgium and destroyed command and communications posts in the rear.[2] While the front line troops were cut off from supplies and the command structure, Germany infantry forces aided by heavy *artillery* overran the isolated bunkers. This tactic of the *"Blitzkrieg"* (lightning war) was successful on all fronts. In addition to their tanks, the Germans had improved their *armored* vehicles and railroad supply network. No longer did an army have to move slowly so that the cumbersome supply wagons could keep up with the front. Technology, especially tanks and planes, set a continuous *front* in constant motion.[3]

The war in Asia and in the South Pacific was fought very differently. In China, masses of *guerillas* fought the modern Japanese army, often in remote mountains. In the South Pacific islands, the US infantry was forced to fight a kind of guerilla war because the dense jungles made tanks and large artillery much less useful than in Europe. Troops moved from island to island, capturing them one at a time and turning them into forward bases for planes. In this war, air and sea power, especially when combined with large aircraft carriers, was the key to victory.

The *Home Front*

Global, *mechanized war* depends upon mass production, complex *logistics* systems, and the strength of the nation's commitment. Between and during the world wars, Japan and the western nations had expanded their manufacturing capabilities and improved their technologies of war. The USSR had not yet developed into an industrial power, and during the war its cities were under constant *bombardment*, making the manufacture of war materiel difficult. But workers continued, sometimes even under a *siege* of continuous bombardment. Britain suffered under aerial bombardment of its manufacturing centers, and German submarines sank military and merchant ships alike, all of which were important for the transportation of food and medicine.

Once officially at war, nations went to wartime economies. Even in the US, which had never experienced an attack on its own territory, all males between the ages of 18 and 26 were *conscripted* (drafted) into the military, except for those with medical disabilities or defense-related occupations. Women replaced men in the workplace. Children and older people worked in agriculture and collected scrap metals for recycling. The government had emergency powers: it could confiscate land and raw materials, commandeer transportation, forbid labor strikes, and censor private mail and the news media. Most non-essential manufacturing was converted to making munitions, weapons, ships, tanks, and planes. Goods were rationed or non-existent. Tires, gasoline, soap, clothing, meat, butter, and sugar were some of the scarce items. Some new terms of insult even became popular: "draft dodger" (a male who evaded conscription), "hoarder" (someone who got scarce goods and kept them), and "black marketeer" (someone who got more scarce goods than entitled to and sold them at inflated prices).

These inconveniences in the US paled beside civilian life in other countries where civilians were often caught on the *front line* of battle, a result of modern weapons and new tactics and *strategies*. The "home front" had originally meant civilians engaged in war supply work, but it eventually became another military front. Factories required large numbers of workers, and had to be located near or in cities. Both the Axis and Allies realized that to win the war, they would have to destroy the enemy's industrial base, and so cities became military targets. *Long-range bombers* allowed the Allies the tactic of *saturation bombing*, with the goal of obliterating the target city. Germany developed *rockets* and *cruise missiles* (pilotless bombs) which rained indiscriminately on southern Britian, mostly London.

In World War I, the heaviest fighting was on the Western Front, two parallel front lines which extended 473 miles from the English Channel to Switzerland. The opponents hunkered down and slaughtered each other, leaving civilians fairly safe behind the front. In World War II, rapidly moving troops put civilians at and between both fronts--in Western Europe and in Eastern Europe. Troops sweeping back and forth through an area, retreating and attacking again, destroyed sites which had no military significance. One such town in Russia was "in the way" of the front four times. In 1941 Belgorod had a population of 34,000. In 1943 there were 140 survivors and not one habitable building,[4] and Belgorod was typical of tens of thousands of villages, towns, and cities. At the end of the war, millions of non-combatant refugees wandered Europe seeking only to survive.

Industry, Science, and Weapons

Winning the war was the national obsession in every country involved in it. In the US, abundant resources and factories protected from enemy attack combined with science to produce enormous amounts of war materiel. "...World War II marks a major turning point in the history of weaponry and warfare, the ultimate marriage of scientific and engineering talent in the service of war."[5] "...By 1943-1944 the United States alone was producing one ship a day and one aircraft every five minutes."[6] Some of the most important weaponry used in WWII is briefly described below.

Tanks: The caterpillar tracks of a tank allow it to traverse terrain which is inaccessible to a wheeled vehicle. It is a self-contained, mobile, armored cannon. The European land war was essentially a tank war, as were the North African campaigns. The greatest tank battle took place at Kursk in Russia where 6,000 tanks, 30,000 guns, and 2 million men clashed on a front of hundreds of miles.[7] Anti-tank weapons, other than those carried by other tanks, were land *mines*, the *bazooka* (a shoulder-fired, small cannon) and flame-throwers which used *napalm*. These anti-tank weapons could also be used against *artillery* or against troops dug into trenches. Troops, if they escaped being burned to death, were killed by asphyxiation.

In battle, small things are often crucial. The British had three times as many tanks as the Germans they fought in the North African desert in 1941-1942, but the British kept running out of gas because of the inferior design of their reserve fuel cans. Once they had copied the German fuel can, the North African campaign turned in their favor.

Airplanes: The US and Britain built four-engine *bombers* which could fly much greater distances and carry heavier loads than the two-engine German bombers. "Each [of the Allied bombers] could drop seven to ten tons of bombs in a single raid, leveling cities. Air raids on Hamburg, Dresden, Tokyo, and Osaka [before the atomic bomb] killed over 100,000 people in each city."[8] Allied planes were capable of reaching the heart of Germany and carried three kinds of bombs, sometimes combining them in one attack: *fragmentation bombs* caused explosions and shock waves, killing people and destroying buildings; *incendiary bombs* set fires; *delayed-action bombs* were high-explosive bombs which killed people trying to put out the fires after the bombing raids. German bombers carried these same kinds of bombs, but because Germany could not produce enough bombers to continue massed air attacks, they developed the rocket (the forerunner of modern *missiles*), though too late in the war and too few in number to give them an advantage. The last major weapon invented and used in the war was the *atomic bomb*, developed and used by the US in 1945.

After 1943, fighter planes, smaller and faster than bombers, escorted bombers and protected them from enemy air attacks.

Aircraft carriers: In the South Pacific, aircraft carriers made it possible for fleets to engage in battles without ever seeing each other. When the Japanese carrier-based planes attacked Pearl Harbor, they sank or damaged five of the eight *battleships* in port.[9] The US aircraft carriers were at sea and went untouched. In 1942 and 1943, "two major sea battles in the South Pacific showed how vital naval air power was in the vast expanses of that ocean."[10] After these two battles, the Japanese began to retreat from the South Pacific islands.

Submarines: In 1942, "Wolf packs of U-boats [German subs] sank 6,250,000 tons of Allied shipping" in the North Atlantic.[11] By 1943, convoys of ships were escorted by aircraft carriers and "hunter-killer" ships, equipped with *depth bombs*, radar, and *sonar*. Sonar located the German submarines underwater so that the depth charges could be dropped directly on them. Radar located the submarines when they surfaced at night, making it possible for planes from the aircraft carriers to attack them.

Rules of War/Codes of Conduct

Attacks on non-combatants had a profound effect on the military psyche. It was one thing for men to die in battle, but when fighting men saw their families and centuries-old cities obliterated, they were increasingly less concerned with the civilian enemy; civilian *casualties* undermined the enemy's morale, and bombing cities became a common tactic.[12]

Traditionally, western nations had concerned themselves with the morality of war and tried to find codes of warfare to constrain the individuals responsible for beginning and fighting wars. Some claim these rules of war are to place limits on the damage; others see the rules as attempts by nations to justify their wars. No matter which view is correct, the long history of rules of war indicates that mankind has long seen war as a troubling moral dilemma.

At the beginning of World War II, the rules of war and conduct, as established in the Hague and *Geneva Conventions*, had these tenets:

- A state has the moral right to self-defense, but force can be used only after all other attempts to remedy the conflict have been tried.
- War must be declared; surprise attacks are forbidden.
- Armies must use only as much force as necessary; "the potential damage of war must not be disproportionate to any possible achievement."[13]
- Use of poison and poison gases is forbidden.

Codes of conduct also governed the ethical behavior of individual fighting men:

- Those who surrender must be taken prisoner, afforded shelter and food equal to that of their captors, and given medical care.
- Prisoners may not be killed, tortured or coerced to give information.
- Attacks on undefended civilians are forbidden, and the property, lives, religious practices, and way of life of people in occupied territory is to remain unmolested.

These rules are still part of international law. Violations of these rules are considered *war crimes* and *war criminals* are to be tried and punished like any other criminal. Following the discovery and liberation of Nazi concentration camps, the *Nuremberg trials* added new war crimes, including one in particular which states that the individual must disobey orders from superiors which require him to violate international laws governing warfare.

All of the above codes of ethical war, except the rule against poison weapons, were violated in World War II.

Laws, rules, and codes of conduct are written far away from battle to control the behavior of warring individuals often under the most stressful conditions imaginable. That they have been obeyed as often as they have is to some people remarkable. For example:

- Not all nations agree to the same rules; often throughout history one fighting force tries to follow rules which the enemy does not accept. Napoleon, during the invasion of Moscow, complained to the Russian commander that Russian civilians were using *guerrilla* tactics, and the Russian, greatly embarrassed, apologized. Similarly, Moslem and Christian codes of chivalry put their armies at great disadvantage to *Mongol* invaders, to whom chivalry and rules would have been astounding concepts.

- National leaders have often perceived a war of aggression as self-defense and been able to persuade their countrymen to that view. In World War II, Japan needed raw materials to survive economically and thought it could get them only by armed conquest.

- *Rules of war* require fighting men to refrain from attacking civilians, but a *regular army* fighting guerrillas is fighting civilians, and often does not know if a civilian is a guerrilla or truly a non-combatant. It is safer to kill everyone. It is difficult for soldiers engaged in combat to fight, and simultaneously worry about the safety of civilians who are in the way of military goals. Men in World War II bomber planes knew they were killing civilians in industrial centers; they could not avoid it. And when they saw what enemy bombers did to their civilians, they were increasingly less concerned with the civilian enemy.

- Soldiers are required to be humane with those who have been trying to kill them and who undoubtedly killed their comrades. They are asked to change from the psychological state of kill or be killed to being humane.

The rules of war and the realities of human psychology under the stress of warfare show "the wide gap between what is and what ought to be."[14]

The war in Europe ended with the US, French, and British pushing Germany and Italy from the west and south, and Russian troops advancing from the east. Italy surrendered in August 1943, and Germany surrendered in May 1945. The Japanese, pushed back to their island fortress, stubbornly held on until August when the US dropped atomic bombs on Hiroshima and Nagasaki. The Japanese *unconditional surrender* was accepted on September 2, 1945.

Presentation Guidelines

1. Try to include the following points in your presentation:
    - the Second World War was similar to the First World War in that a great deal of national effort went channeling and using resources for the production and maintenance of war machinery
    - because resources were so crucial to each nation's war effort, cities and industries were became targets of enemy attack
    - as a result of the great distances which often separated enemy forces, a huge number of people (soldiers and civilians) were killed without ever meeting or seeing "the enemy"
2. Try to answer the following questions in your presentation:
    - a) How did the incredible power of new military technologies influence the general importance of war strategies? Which of the two do you think contributed more to winning the war?
    - b) How useful were the conventions (rules) of war during WWII? What does this say about the conventions themselves, and about the way in which modern war is fought?

FOOTNOTES

[1] The Rise and Fall of the Great Powers, Paul Kennedy, 1987. Random House, New York City, NY, p. 347.

[2] War, Gwynne Dyer, 1985. Dorsey Press, Homewood, IL, p. 85.

[3] Ibid., p. 88.

[4] Ibid., p. 90.

[5] What Kinds of Guns Are They Buying for Your Butter?, Sheila Tobias, et al., 1982. William Morrow and Company, Inc., New York City, NY, p. 48.

[6] Kennedy, p. 355.

[7] Dyer, p. 90.

[8] Tobias, et al, p. 50.

[9] Ibid., p. 49.

[10] Kennedy, p. 348.

[11] Tobias, et al, p. 48.

[12] Dyer, p. 92.

[13] "Ethics and War: A Catholic View," Joseph C. McKenna, S.J., reprinted in International War: An Anthology, edited by Melvin Small and J. David Singer, 1985. Dorsey Press, Homewood, IL, p. 104.

[14] Ibid., p. 99.

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Key Terms

aerial: relating to aircraft and the atmosphere. Aerial bombing is carried out from the air.

aircraft carrier: a large ship (the US carrier Nimitz is more than 1,000 feet long) whose deck serves as a landing strip for fighter planes and helicopters; credited with winning the war in the South Pacific islands in WWII because the US could take the air war to the enemy instead of fighting other battleships. Unless they are nuclear-powered, aircraft carriers need escorting tankers to carry their fuel and the fuel for the 75-90 planes they carry.

alliance: a formal agreement between nations to support, and sometimes to defend, each other. In WWI Germany, Austria, and Italy formed the **Triple Alliance**.

ally (allies): any nation united with another under a treaty that may be offensive, defensive, or both. In World War II, Britain, France, the US, and the USSR were called the Allies.

annex: to appropriate a state or part of a state; to incorporate without permission the territory of another state into an existing state.

appeasement: giving in to the demands of a hostile or aggressive power in an attempt to avoid conflict.

archer: an infantryman trained in the usage of the bow and arrow.

armistice: a truce or suspension of hostilities.

armor: protective metal plating (**plate armor**) used by soldiers, warships, warplanes, tanks, cars or trucks. (See also **chain mail**.)

artillery: weaponry that fires projectiles (such as a cannon or rocket launcher). **Field artillery** is used strictly on the battlefield.

atomic bomb: a nuclear weapon using fisson energy only; first developed by the US and used at the end of World War II against Hiroshima and Nagasaki, Japan. The first atomic bomb dropped had the force of 12,500 tons of TNT, the second had the equivalent of 22,000 tons of TNT. Thus a single B 29 bomber carrying one atomic bomb duplicated the damage seen earlier in World War II with saturation bombing.

Axis: an alliance entered into by major powers to demonstrate solidarity. In World War II, Japan, Germany, Italy, and the puppet governments of Croatia, Slovakia, and Romania were called the Axis.

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barbed wire: coiled wire with sharp barbed points often used along trenches to ensnare attacking soldiers.

battleship: ship armed with artillery; used to shell other ships or coastal installations. Until WWII, the most important kind of warship. In WWII, the US built more aircraft carriers than battleships because they allowed control of the air war.
Planes could bomb ships and sink them more effectively than battleship artillery, and without risking loss of the ship.

bayonet: an edged steel blade with a point, attached to the muzzle of a gun. Permits a gun to be used like a spear.

bazooka: a hand-held weapon of metal tubing, for aiming and launching electrically-fired, armor-piercing rockets; can be used as an anti-tank weapon.

Blitzkrieg: (Blitz • creeg) German for "lightning war." A smashing, surprise assault with ground and air forces.

bomb (or **bombers**): an explosive, incendiary or chemical-filled container; can be dropped, hurled or detonated by a timing device (ie. a **delayed action** bomb does not explode when it strikes it target.) **Fragmentation bombs** are designed to explode into thousands of deadly fragments of steel (see also **atomic bomb**.) **Incendiary bombs** explode into flame, and when used in a bombardment, may create huge firestorms which can ravage entire cities. A bomber is a plane designed to carry and deliver bombs; first large-scale use was in WWII. There are many different kinds of bombers.

bombardment: intensive bombing of enemy forces, territory, or cities.

bunker: a reinforced dugout protected from attack and used by soldiers for defense.

campaign: a military operation, or operations, undertaken as a distinct stage in a war or as an overall strategic operation; a military expedition conducted for a special purpose. (See also **tactics** and **strategy**.)

cannon: a large artillery gun; modern cannons have a long range and fire explosive shells.

casualty: dead and wounded; war statistics often list civilian and military casualties separately.

catapult: a device for launching planes from the deck of a ship. Used in ancient times to throw stones or burning materials into fortified positions. Also used to throw rotting bodies into besieged towns to cause disease. A siege machine.

cavalry: combat troops mounted originally on horses and later transported by motorized armored vehicles.

chain mail (also **chain armor**): armor made of interlacing metal rings. First introduced in the period 1100-1300 and used until the late 1600s when guns replaced the bow-and-arrow and the pike. Plate mail (solid plates of metal) was also used.

city-state: a state made up of an independent city and the territory it directly controls. Vatican City is one of many city-states.

clan: a social group composed of several families descended from a common ancestor, bearing the same family name, and following the same chieftain.

code of conduct: a set of rules or principles to govern individual actions and behavior. The Universal Code of Military Justice governs the behavior of soldiers of many countries, including the US, in combat and outside of combat. These rules have the force of law and were arrived at through the Hague Conventions (1899 and 1907) and the Geneva Conventions (1929 and 1949).

commonwealth: a loose association of independent states who share economic ties.

conscription: a draft; compulsory military duty. The first draft was in Florence in 1506; all males between 18 and 30 were conscripted. The first mass conscription, one which extended to an entire country, was the Levee en Masse in France in 1793. All young men went into the army; older men made weapons and moved supplies; women served in hospitals and made tents and uniforms; children made bandages. Public buildings were made into barracks; public squares were turned into munitions factories. All firearms had to be turned over to troops. Saddle and draft horses not used in agriculture were confiscated.

convoy: a train of transportation vehicles.

courier: a member or messenger of the armed forces who carries supplies, mail, or information.

crossbow: an archery weapon used in medieval times; the bow is set on a wooden stock which is grooved to hold and direct the arrow (or "bolt"), and notched to hold the bowstring. The bowstring is released by a trigger at the bottom of the stock.

cruise missile: a pilotless missile propelled by a jet engine that flies close to the ground. Cruise missiles may be armed with either conventional or nuclear warheads and launched from an aircraft, a submarine, a surface ship, or a land-based platform.

declaration of war: an announcement stating that a condition of war exists between countries. The US military actions in Korea and Vietnam were technically not wars because it was never declared.

demilitarized zone: a defined area in which it is prohibited to station or concentrate military forces, or to retain or establish any kind of military installation.

democracy: a government in which the people hold power either directly or through elected representatives; rule by those ruled.

depth bomb (or **depth charge**): a powerful explosive charge, exploded underwater; anti-submarine weapon; differs from torpedoes (fired missiles) or mines (explosives left floating in the water). A depth bomb is an offensive weapon, dropped on the target, in early days, from the decks of ships and later from planes.

dictator: a ruler with absolute power and authority. Used critically and negatively.

draft: (See **conscription**.)

empire: states or territories under the absolute rule of an emperor or empress. A state uniting many territories and peoples under one ruler.

fascism: a system of government characterized by rigid, one-party dictatorship with forcible suppression of opposition, centralized government, belligerent nationalism, racism, and militarism. First instituted in Italy in 1922. A fascist is a person who believes in or practices fascism.

flank: the left or right side of a fleet or army; the flanks, or wings, protect the main force in the center and are more lightly manned.

front: the line of contact of two opposing forces (the **front lines**); the space occupied from the extremity of one flank to the other flank. A **continuous front** means there is no fixed front line of combat but fluid, changing fronts. The **home front** refers to industrial and agricultural activities which support the fighting front.

Geneva Conventions: attempts to limit modern warfare by defining universal rules of war, established in 1929 and 1949; in conjunction with the earlier Hague Conventions, the Geneva Conventions defined many of the laws of war which have been applied throughout the 20th century. (See also **Hague Conventions.**)

genocide: the deliberate, systematic killing of a whole national or ethnic group.

global war: a war not confined to one area or to a single continent; a war which involves the entire world. WWII was the world's only global war. A nuclear war would very likely be global because it would affect the entire world.

grenade: a small, explosive or chemical bomb, originally meant to be thrown by hand, but often hurled by launchers.

guerrilla: a member of an irregular army not directly controlled by any central government; a combatant in guerrilla warfare. Guerrillas differ from soldiers in a national army in several ways: they often operate in small, loosely connected groups; they may live among civilians rather than in military encampments, and their weapons are often less sophisticated than those of the national regular army. The term "guerrilla" was first used in Spain when Spanish nationalists fought the French occupying army in the 1800s. (Also spelled "guerilla.")

guerrilla warfare: operations carried on by independent or semi-independent forces; usually conducted by irregular forces acting alone or together with regular forces. Regular troops also sometimes use guerrilla tactics. The objective of guerrilla warfare is to harass, delay or otherwise disrupt the enemy's military operations. Guerrilla tactics are different from regular forces' tactics and include passive resistance, espionage, sabotage, diversion, assassination, and propaganda.

Hague Conventions: attempts to establish universal rules of war in 1899 and 1907, including definition of the humane treatment of prisoners and the prohibition of poison and poisonous weapons. The provisions of these conventions as well as those established by the later Geneva Conventions were made US law following Senate ratification. (See also **Geneva Conventions**.)

holy war: a war fought in the name of a deity to protect or spread a particular religion; a war believed to be sanctioned by God.

infantry: a branch of the army in which soldiers are organized, trained, and equipped to fight on foot.

International Red Cross: an international society for the relief of suffering in time of war or disaster. Started by Florence Nightingale during the Crimean War (1854-1856), and made a permanent organization in 1866.

javelin: a short, light spear used by the Romans. Thrown rather than thrusted.

just war: a body of thought developed over many centuries which attempts to define when war is moral or immoral. An attempt to limit the justifications for using armed force and to control the behavior of nations and individuals at war.

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Kellogg-Briand Pact: agreement signed by the US and fourteen other nations in 1928. By signing the pact, each nation agreed to renounce war as an instrument of national policy. It was later ratified by 63 other nations.

knight: a priveleged soldier mounted on horseback; knights were armed with armor and swords, lances, or even bow and arrow.

lance: a spear; a long shaft with a sharp steel head once carried by horsemen. The medieval lance was 16 to 20 feet long, heavy, and often supported on a rest attached to the breastplate. Later ones were 9 to 10 feet long and supported by a sling over the arm.

lasso: a rope with a noose tied into it, used often to catch horses, or other animals.

League of Nations: an international organization (1920-1946) established to promote international cooperation and peace; it was succeeded by the United Nations. Following WWI, the League created the World Court and the International Labor Conference and helped to work out the details of the Treaty of Versailles. The League of Nations failed because it could not enforce its edicts. When Italy invaded Abbysinia in 1935, the League was unable to compel Italy to withdraw.

logistics: the branch of military science which deals with the procuring, maintaining, and transporting of materiel, personnel, and facilities.

longbow: a large bow drawn by hand, which fires a long feathered arrow.

machine gun: a weapon that automatically fires small-arms ammunition, and is capable of sustained rapid fire. The first was called a Gatling gun, named after its US inventor, and used in the US Civil War (1860s). During and after WWI, machine guns mounted on planes allowed strafing--raking a target with rapid fire from the air.

Maginot Line: a line of defensive fortifications built in 1930-1934 by France on its border with Germany. Named for the French minister of war.

materiel: all items of equipment necessary to maintain and support the military. Includes administrative and combat supplies, but excludes ships and naval aircraft.

mechanized war: war dependent on motorized vehicles, tanks, self-propelled guns, and other machinery which increase mobility and striking power.

mercenary: a paid soldier in the service of a foreign country. Mercenary armies replaced feudal armies of noblemen-officers. Mercenary armies were used extensively in the 15th and 16th centuries, instead of standing armies of citizens.

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mine: land mines are explosives buried in the path of enemy foot soldiers or motorized troops. The first mines did not explode until pressure was put on them, but they can now be remotely controlled. Floating mines are used in bodies of water to deter and damage ships. Early water mines were called torpedoes. (See also **torpedo**.)

missile: an object thrown or projected to strike targets at some distance.

mobilization: the organization of people and resources for war; readying for immediate action in wartime. (In WWI, men released from duty were said to have been "de-mobed.")

musket: in its earliest form, a very heavy, clumsy and inaccurate smooth bore gun. The term was first used in Spain in the 1530s. These muskets required a fork rest to hold up the muzzle and over 80 movements to reload them. Men stood in ranks; the first rank fired and then retired to reload while the new front rank fired and then retired and so on. Muskets were not aimed. Musketeers simply fired volleys at the opposite ranks of musketeers.

napalm: thickened gasoline used in flamethrowers and incendiary bombs. The fire sticks to the object or person it hits. It is made from **na**phtha and **palm**itic acid. An early form of it was used by Moslem forces in the Middle Ages.

nation-state: a nation is a stable, historically developed community of people with a territory, economic life, distinctive culture and language in common, whereas an empire may be a collection of different cultures. Nation-states have a ruling organization and see themselves separate from other nations. The complete sovereignty of the nation-state was operational in Europe by 1650. A citizen's first allegiance to the state replaced former allegiances to the church or to a local feudal lord.

Nazi: German fascist political party called the National Socialist German Workers' Party ("Nationalsozialistische Deutsche Arbeitspartei"), founded in 1919 and abolished in 1945; a member of this party. The Nazi party, led by Adolf Hitler, seized control of the German government in 1933.

neutral: not aligned to any nation or government.

nomad: a member of a group of people who travel, and who do not have a stationary home.

Nuremberg: a city in West Germany; site of the international trials of Nazi war criminals (1945-1946). The trials established that individuals are required by international law to disobey commands which require them to violate international laws of warfare.

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oligarchy: rule by an elite, an aristocracy; a government in which the power or governance is held by a few people.

phalanx: a unit of foot soldiers formed in close, deep ranks and files. The Macedonian phalanx was 12-16 ranks deep and the men were armed with 18-foot lances.

plate armor: (See **armor**.)

propaganda: any systematic, widespread dissemination or promotion of particular ideas, doctrines or practices to further a cause or to do damage to an opposing cause; often used disparagingly to connote deception or distortion.

radar: Radio detection and ranging. Uses beams and reflected radio waves for locating objects, measuring distance or altitude. Used in submarines, planes, and on land for navigating, homing, or bombing.

reconnaissance: an exploratory survey or examination to seek out information about enemy positions or installations; today, this can be done by satellites or other electronic devices.

regular army: the standing army of a state; regular troops, as opposed to militia, volunteers, guerrillas. Supported, sanctioned and controlled by the government.

rifle: a long-barreled firearm with spiral grooves on the inner surface of the barrel. The spiraling is called rifling and gives the weapon greater accuracy and range than smooth bore muskets. It was first used effectively in warfare in the US Civil War. Instead of firing mass volleys into advancing enemy lines, marksmen could take cover behind ditches and trees and aim at individuals.

rocket: missiles propelled by hot gases. Can be launched from submarines, ships, planes or from land.

rules of war: (See **code of conduct**, **Geneva Conventions**, and **Hague Conventions**.)

sabotage: an act intended to injure, interfere with, or obstruct the national defense by injuring or detroying national defense or war materiel, premises, or utilities. Saboteurs often destroy power plants, roads, dams, and railways.

saturation bombing: intense area bombing intended to leave no place in the target area free from destruction. First practiced in World War II when great numbers of long range bombers dropped many small or medium size bombs on England and Germany. The invention of the atomic bomb made it possible to conduct saturation bombing with one plane carrying one bomb. Saturation bombing sometimes created firestorms in which the temperature reached 800° C and air currents created by the fire caused it to feed on itself.

siege: placement of an army around a fort or fortified town to compel surrender without incurring losses through assault. Besiegers cut off forts from outside supplies. Included in modern siege machinery are bombers and long-range artillery.

sonar: electronic apparatus which can detect the presence of objects (such as submarines) under water by reflecting sound waves off the bottom of the ocean floor.

steering council: a small group of individuals who make decisions on the behalf of a larger group.

stirrup: a ring with a flat bottom hung from a saddle by a leather strap and used as a footrest in mounting and in riding horses; gives the rider greater stability and security.

strafe: (See **machine gun**.)

strategy: the planned use of political, economic, psychological, and military forces to assure victory. "Strategy" refers to the overall plan while tactics refer to plans limited to a battle.

submarine: a warship used underwater, usually armed with **torpedoes**, and sometimes with nuclear missiles.

tactics: how combat units are used; the ordered and disciplined arrangement and maneuvers used to achieve the objectives of a battle or campaign. (See **strategy**.)

tank: a self-propelled, heavily armored offensive vehicle with caterpillar tracks rather than wheels. It has an enclosed, revolving turret armed with a cannon and machine guns. First developed by the British in World War I but improved by the Germans who used them from the beginning of World War II.

torpedo: an explosive underwater missile used at sea. Early mines (used to mine waters during the Civil War.) May be launched from submarines, ships, or aircraft. Extremely difficult for ships to avoid, mines were called torpedoes. Admiral David Farragut, when he said, "Damn the torpedoes; full speed ahead!" was talking about mines, not modern torpedoes.

total war (or **unlimited war**): a war in which civilians, as well as the military, are involved either as deliberate or accidental targets. Armed forces make no effort to safeguard civilian lives or property and may deliberately destroy them--an effective way to destroy enemy morale as well as the enemy's manufacturing base. Some cultures have seen total war as morally defensible, others have not. The US Civil War is called the first modern total war--the US suffered more casualties than in World War I, World War II, Korea, and Vietnam combined.

treaty: a formal document of agreement between or among nations which might relate to peace, alliance, or trade. The **Treaty of Versailles** was a peace treaty signed by Germany, France, Britain, and the US at Versailles, France in 1919, which ended World War I and set out the terms for Germany's future behavior. Its purpose was to weaken Germany so that it would be impossible for Germany to make war again. To accomplish this, the treaty placed sole blame for starting the war on Germany and required Germany to pay huge sums of money in war reparations. It also gave away German territory and overseas colonies, and forced Germany to virtually disarm. The Treaty of Versailles also emphasized the need for international agreements to keep the peace.

trench (also **trench warfare**): a ditch or system of connected ditches; in trench warfare, earth is thrown up on either side of the ditch to form a protective barrier, parts of the trench are covered with wood and earthen roofs, and soldiers live in and fight from the trenches. The soldiers in WWI contracted trench foot, trench mouth, and trench fever from living in the muddy, lice and rat-infested trenches.

tribe: a group of families, or clans, descended from common ancestors and forming a community under a leader or chief.

Triple Alliance: (See **alliance**.)

Triple Entente: the military understanding reached by Great Britain, France, and Russia before WWI as a counterbalance to the Triple Alliance; an "entente" is an understanding or agreement between nations.

trireme: ancient warship with three banks of oars. The Athenian trireme had a length of 140 feet, a beam of 20 feet, 174 rowers, 20 sailors and a small force of armed soldiers on its flat deck for hand to hand combat. The trireme also had a 10 foot metal encased ram on its prow.

unconditional surrender: complete defeat; surrender without any preconditions or agreement. An army or nation cannot know what the victor will have in store for it after an unconditional surrender, and so warring nations try to avoid being forced into unconditional surrender.

unlimited war: (See **total war**.)

war crime: a violation of international law or of accepted laws of war, or violations committed in connection with a war by military forces or by a government; punishable as any crime.

wing: (See **flank**.)

Information Sheet

Effects

Use one letter below to describe the effects of the techniques listed on pages 1 and 2 of this Handout. The effects refer to when the technique was first used. Each letter can be used more than once on the chart. The effects are:

(a) injury, but rarely death, to individuals

(b) injury or death to individuals

(c) injury or death to individuals from flying fragments

(d) injury or death to groups from flying fragments

(e) injury or death to masses of people and extensive damage to property (buildings, fortresses, ships,) from flying fragments and debris

(f) injury and death from "spraying" groups of people, for example with bullets

(g) destruction of ships and personnel from blast and flying fragments

(h) various medical effects: vomiting, skin irritation, inhibition of nervous system, or death due to toxic reations

(i) death, injury, or disabling sickness from explosion, burning, suffocation, wind force, or radiation.

Technical Advances

Use as many letters as apply below to describe the technical advances of the techniques listed on the first three pages of this Handout. A technical advance is a technical improvement of a weapon over a previous similar weapon.

(a) increases in delivery speed

(b) increases in range (distance between combatants)

(c) increases in lethality (likelihood of death to targeted person or people)

(d) increases in accuracy (weapon more likely to reach target)

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(e) increases in efficiency in killing people or destroying targeted property; (also called yield)

(f) could be used against a new kind of target (groups of people, civilians, property, cities, ships, or other), or over a wider area

(g) reloading capability provided or made easier

(h) promptness of lethality

(i) transportability

(j) survivability

Vocabulary:

anti-property weapon: a weapon used primarily for the destruction or damage of physical property (buildings, ships, etc.).

anti-personnel weapon: a weapon aimed at injuring or killing personnel (soldiers) or other people.

combatants: professional soldiers or others fighting a war.

missile: any projectile; any object designed to be thrown, dropped, projected, or propelled for the purpose of hitting a target.

non-combatants: civilians; people who are not fighting in a war.

survivability: the degree to which a weapon is able to withstand an attack.

warhead: destructive element of a nuclear, chemical, or conventional weapon.

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THE TECHNOLOGIES OF WARFARE: A SELECTED LIST

Directions: The chart below identifies the technologies of warfare and the approximate dates they were developed for military use. Use the letter codes from page 3 to complete the effects and advances columns of the chart.

Technique	Approx date developed for military use	Description	Distance (meters): How far force can be projected	Effects	Technical advances
Foot/Fist	BC		1 m.	a	none
Rock	BC		10 m.	a	b, c
Knife	BC		1 m.		
Spear	BC		10 - 50 m.		
Bow & Arrow	BC		50 m.		
Catapult & Rock	700 AD	A device for hurling rocks or other weapons; used for property damage	200 m.		
Crossbow & Arrow	900 AD	A relatively powerful bow and arrow device; designed to be held horizontally	50 m.		
Musket & Gunpowder	1300 AD	A handmade, hand-held, front-loading gun	10 m.		
Cannon & Cannonball	1400 AD	A factory-manufactured property and personnel weapon which can be carried aboard ship or placed on land	1 - 5 km.		
Rifle & Bullets	1830 AD	A reloadable, factory-manufactured, hand-held weapon	100 - 1,000 m.		

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Machine Gun & Bullets	1860s AD	A rapid-fire, reloadable weapon that can be used on land, at sea, and from the air	100 - 1,000 m.
Ship	1600s AD	A vehicle which floats in water; the ship or its passengers can be armed to attack cities or other ships	depends on fuel and weather
Hand Grenade	late 1800s AD	A small, hand-held and hand-thrown explosive charge	10 m.
Tanks & Artillery	early 1900s AD	An armored vehicle with caterpiller tracks and a cannon mounted on a revolving turret. Weaponry that fires projectiles.	300 m. - 50 km.
Submarine & Torpedo	1910-1917 AD	Manned, underwater ship that is armed with a small explosive charge	10 km. (torpedo)
Chemical Weapons	1914 AD	A toxic chemical usually dispersed as gas which in some way kills or debilitates people, other animals, or plants	depends on delivery vehicle
Bomber	1914 AD	An airplane which drops an explosive charge on its target	500-1,000 km.
Cruise Missile	1940s AD	A pilotless airplane designed to carry nuclear or conventional warheads	1,000-4,000 km.
A-Bomb	1945 AD	A nuclear explosion about 1,000 times more powerful than a chemical bomb of same size/ weight; can be delivered by a ballistic or cruise missile as well as by a cannon-like launcher, or airplane	depends on delivery vehicle

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H-Bomb	1953 AD	A nuclear explosive about 1,000 times more powerful than an A-Bomb; can be delivered by ballistic or cruise missile, cannon-like launcher, or airplane	depends on delivery vehicle
Ballistic Missile	1959 AD	A rocket-propelled delivery system designed to carry nuclear or conventional warheads; for one-time use only	500-10,000 km.

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THE TECHNOLOGIES OF WARFARE: A SELECTED LIST

Directions: The chart below identifies the technologies of warfare and the approximate dates they were developed for military use. Use the letter codes from page 3 to complete the effects and advances columns of the chart.

Technique	Approx date developed for military use	Description	Distance (meters): How far force can be projected	Effects	Technical advances
Foot/Fist	BC		1 m.	a	none
Rock	BC		10 m.	a	b, c
Knife	BC		1 m.	b	h
Spear	BC		10 - 50 m.	b	b
Bow & Arrow	BC		50 m.	b	b, d, f, g
Catapult & Rock	700 AD	A device for hurling rocks, flaming arrows, and other weapons; used for property damage	200 m.	e	b, c, f
Crossbow & Arrow	900 AD	A relatively powerful bow and arrow device; designed to be held horizontally	50 m.	b	a, d
Musket & Gunpowder	1300 AD	A handmade, hand-held, front-loading gun	150 - 200 m.	c	a, e
Cannon & Cannonball	1400 AD	A factory-manufactured property and personnel weapon which can be carried aboard ship or placed on land	1 - 5 km.	e	f
Rifle & Bullets	1830 AD	A reloadable, factory-manufactured, hand-held weapon	100 - 1,000 m.	c	a, b, d

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Machine Gun	1860s AD	A rapid-fire, reloadable weapon that can be used on land, at sea, and from the air	100 - 1,000 m.	f	a, b, c, d
Ship	1600s AD	A vessel which floats in water; the ship or its passengers can be armed to attack cities or other ships	depends on fuel and weather	g	c
Hand Grenade	late 1800s AD	A small, hand-held and hand-thrown explosive charge	10 m.	d	c
Tanks & Artillery	early 1900s AD	An armored vehicle with caterpiller tracks and a cannon mounted on a revolving turret. Weaponry that fires projectiles.	300 m. - 50 km. (artillery)	d	i, j
Submarine & Torpedo	1910-1917 AD	Manned, underwater ship that is armed with a small explosive charge	10 km. (torpedo)	g	e, j
Chemical Weapons	1914 AD	A toxic chemical usually dispersed as gas which in some way kills or debilitates people, other animals, or plants	depends on delivery vehicle	h	f
Bomber	1914 AD	An airplane which drops an explosive charge on its target	500-1,000 km.	e	f
Cruise Missile	1940s AD	A pilotless airplane designed to carry nuclear or conventional warheads; for one-time use only	1,000-4,000 km.	depends on warhead type	d, j
A-Bomb	1945 AD	A nuclear explosion about 1,000 times more powerful than a chemical bomb of same size/ weight; can be delivered by a ballistic or cruise missile as well as by a cannon-like launcher, or airplane	depends on delivery vehicle	i	c, e

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H-Bomb	1953 AD	A nuclear explosive about 1,000 times more powerful than an A-Bomb; can be delivered by a ballistic or cruise missile, cannon-like launcher, or airplane	depends on delivery vehicle	i	c, e
Ballistic Missile	1959 AD	A rocket-propelled delivery system designed to carry nuclear or conventional warheads; for one-time use only	500-10,000 km.	depends on warhead type	b, d

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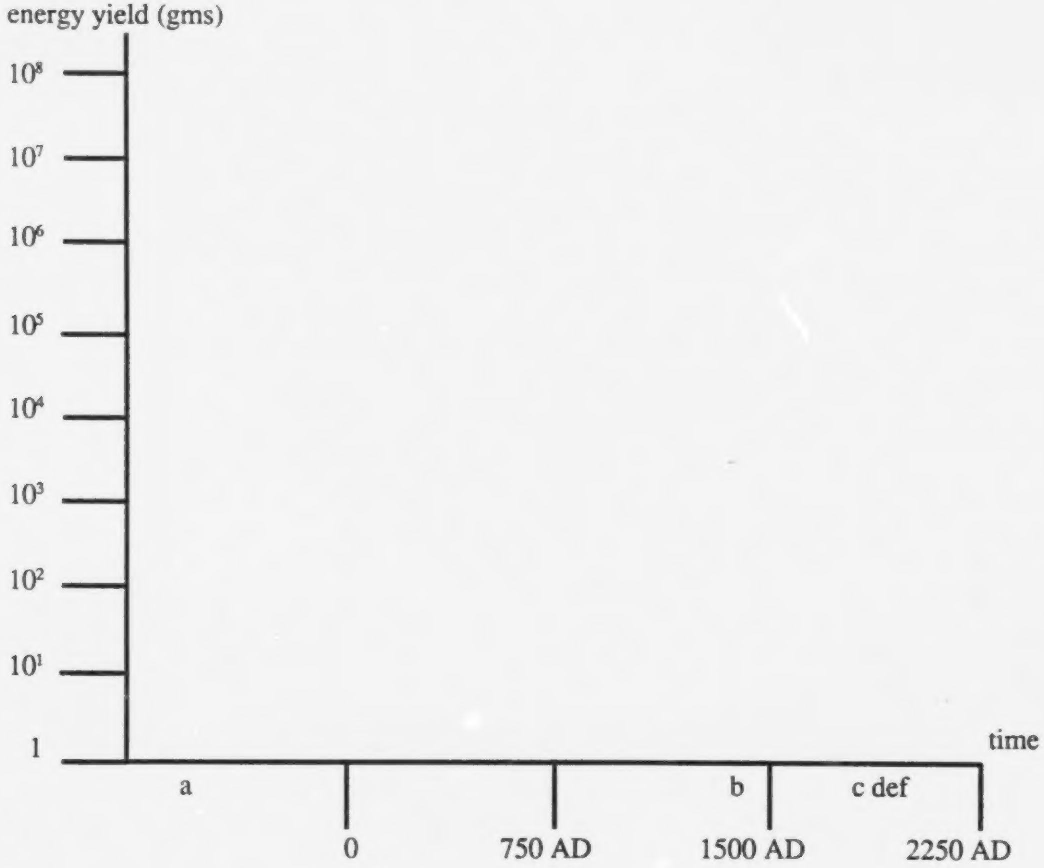
Handout #11A

Graph: Time Vs. Energy Yield

Directions: plot these values for explosive energy yield on the graph:

a	Spear	0.1 gram (gm)	d	Conventional bomb	1,000,000 grams
b	Cannon	10,000 grams	e	A-Bomb	10,000,000,000 grams
c	Machine Gun	10 grams/shot	f	H-Bomb	10,000,000,000,000 grams



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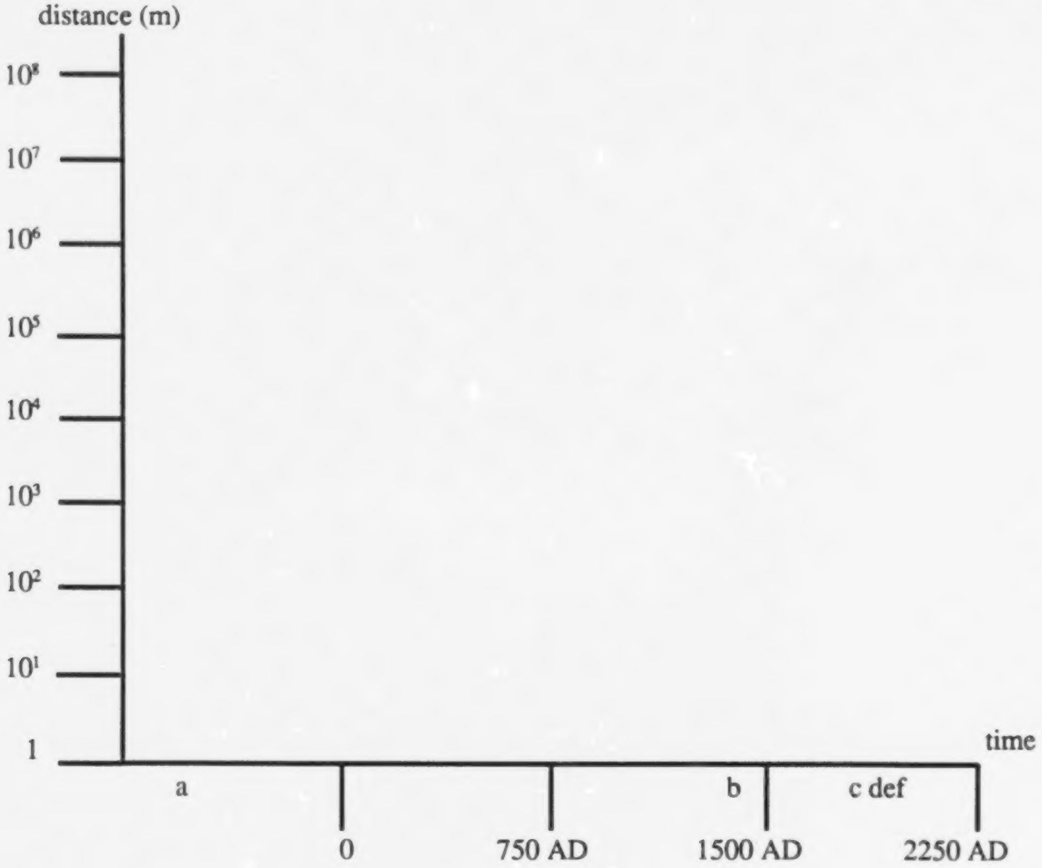
Handout #11B

Graph: Time Vs. Distance-to-Target

Directions: Plot these values for distance-to-target with the best delivery systems:

a	Spear	10 meter (m)	d	Conventional bomb	1,000,000 meter
b	Cannon	1,000-10,000 meter	e	A-bomb	5,000,000 meter
c	Machine Gun	1,000 meter	f	H-bomb	10,000,000 meter



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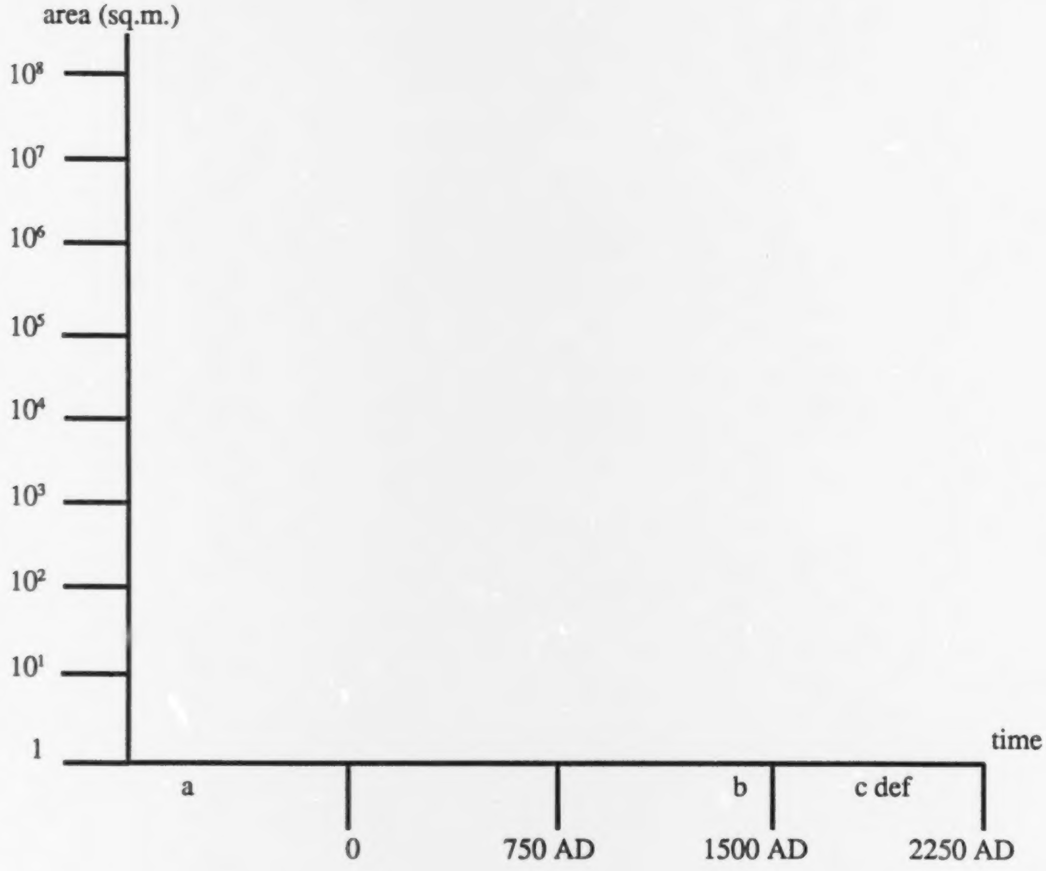
Handout #11C

Graph: Time Vs. Lethal Area

Directions: Plot these values for lethal area in square meters (sq.m.):

a	Spear	less than 1 sq.m.	d	Conventional bomb	100,000 sq.m.
b	Cannon	10,000 sq.m.	e	A-bomb	1,000,000 sq.m.
c	Machine Gun	100-1,000 sq.m.	f	H-bomb	100,000,000 sq.m.



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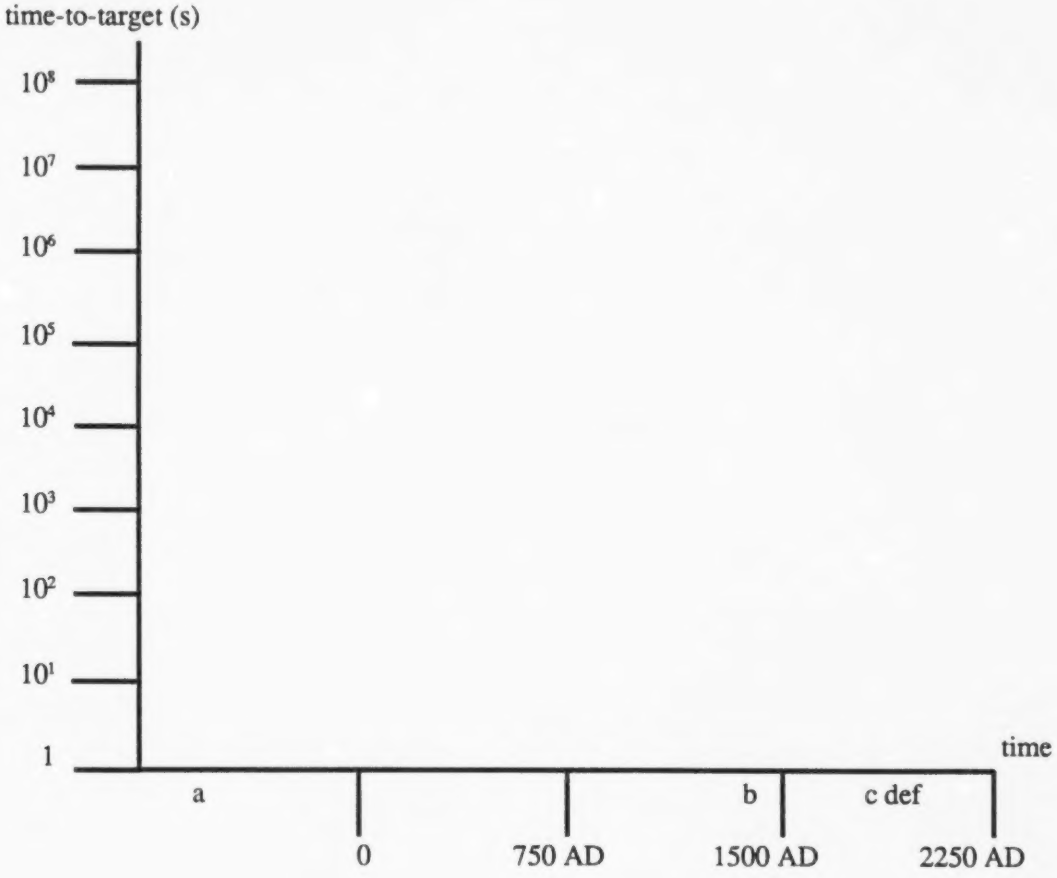
Graph: Time Vs. Time-to-Target

Directions: Plot these values for time to target with best delivery system:

a	Spear	1-10 seconds (s)	d	Conventional bomb	3,600-36,000 seconds (1-10 hrs)
b	Cannon	10-100 seconds	e	A-bomb	60-1800 seconds (1-30 min)
c	Machine Gun	1 second	f	H-bomb	60-1800 seconds (1-30 min)



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Energy yield is the amount of energy released when the weapon strikes its target and/or explodes. It is measured in mass of explosive energy (or TNT equivalent).

Distance traveled represents the farthest distance that a weapon can be propelled using the delivery system most practical.

Time-to-target is the elapsed time between when a weapon is launched and when it hits its target. It is measured in seconds (s).

Lethal area represents the maximum surface area within which a weapon could cause certain death to humans. This quantity is measured in square meters (m^2).

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Introduction

Wars have occurred throughout human history and are often considered an inevitable part of the future. Yet the idea that a war is "just" only under certain conditions has also existed throughout history. The relationship between war and the attempts to define its justifiability is a tricky one. The purpose of this one-day lesson is to see what the criteria for a just war have been in the past and how they have changed with the evolution of the technologies and strategies of warfare. Finally, students are to consider what criteria for just war are most applicable to wars today.

Objectives

In this lesson, students will:

- discuss the history of just war theories and the contemporary debate about just war
- consider how the notion of a just war is related to the nature of warfare

Materials

- one copy per student of Handout #12: *Meanings of War*

Procedures: Day 6 (second half)

Rules of War: 30 minutes

1. To provide a context for the study of the rules of war, ask students the following questions:
    - What are some of the questions about the morality of war (including weapons and strategies) that have been addressed in class thus far?
    - Have these questions changed as the technologies of war have changed? Is there a connection between changes in warfare and changed perceptions of morality in war? (Consider the impact of WWI and WWII on the way we think about global and **total war**.)

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- How does the nature of war create problems for the moral issues of war?

2. Remind students that disputes over the morality of war have been in existence for as long as war itself. Point out that in the previous case study readings, students learned a little about the historical origins of the rules of war. Today they will learn the philosophical origins of the rules of war, and the modern status of these rules.

3. Read the following statement to students, and ask them to consider what it says about the morality of war:

Read Aloud

> "Our nation has laws against killing, and many religions condemn violence, yet at times of war some individuals are not only permitted to kill others, but often required to do so."

Ask students what questions they have about this statement. Write their questions on the board. Some possible questions are:

- The idea of war seems to be in conflict with religion. Can wars be justified or at least accepted by religion?
- Why is it easy for nations to break the rules of warfare without suffering punishment?
- Why can individuals acting on behalf of their country act differently than other individuals?
- Why do individuals sometimes think they are bound by their countries to fight wars?

4. Ask students about any other moral issues or questions about war which were mentioned in their oral reports or which they have thought of. Some possible questions are:

   a. Should certain kinds of weapons be banned from warfare? Who should determine which weapons should be banned?

   b. Do you think it is important to distinguish between the kinds of targets military forces choose? Are human targets the same as industrial or military targets?

   c. How can non-combatants be safe-guarded in battle zones?

   d. How should an army of occupation behave toward civilians of the occupied territories?

   e. How should military prisoners of war be treated? Is torture justified if it is for the purpose of obtaining secret military information?

   f. Should combatants who surrender be killed or should they be taken prisoner? Might there be a third option?

   g. When can a nation justify going to war?

   h. When can war not be justified? Who should be allowed to make the decision to go to war?

   i. When is an individual justified in fighting a national enemy? When is an individual justified in fighting his own government?

   j. Should strategies be subject to law? Is total war a justifiable strategy? (Be sure students understand the difference between total war and global war.)

   k. How can bans against specific weapons or specific conduct during wars be enforced? Who would punish war criminals and enforce international laws?

5. Inform students that they will learn the history of this moral questioning, using just war theory as an example. Write "**just war theories**" on the chalkboard. Write the following question on the board, "Under what circumstances is war permissible or just?" and explain that just war theories try to answer this question.

6. Distribute Handout #12, *Meanings of War*, to students. Assign them to read this article for the rest of the period and as homework. Students should pay careful attention to the two theories of war presented.

Procedures: Day 7 (first half)

Meanings of War: 25 minutes

1. Begin the discussion by asking students which of the wars covered in their reports fit the two definitions in *Meaning of War* (1) war as a limited instrument of foreign policy 2) war as an unlimited fight between countries).

2. Focus on the ideas contained in the homework reading by presenting the information below. Remind students to take notes. After reading each theory, ask students to provide some examples of wars which fit the theory.

Philip Rhinelander, a Stanford professor of philosophy, and Vice-Admiral James Stockdale have suggested that there are five theories of war. These are:

a. War is a fight with *no restraint*. According to this theory, victory is attained when one side completely destroys the other. The battle between Melos and Athens described in Thucydides' The Peloponnesian War was an application of this theory.

b. War is a fight with only ***prudential restraint***. This means that war is an extension of diplomacy or a way of achieving political ends with military means. As long as a war is useful, according to this theory, it is permissible. A famous proponent of this theory was the German philosopher of military affairs, Karl von Clausewitz.

c. Wars must be fought within ***moral restraints***. A war is justified only if it meets certain moral criteria. Limitations regarding circumstances under which war may be initiated, proper conduct during war, and the treatment of civilians and prisoners are all possible criteria for "just war."

d. War is *always wrong*. There are neither practical considerations nor moral circumstances under which war is acceptable. Pacifists, such as Gandhi, have argued that we are morally required to seek alternatives to war, no matter what our cause.

e. War is *historically necessary*. According to this theory, historical circumstances have made wars inevitable. For example, some argue that the existence of "evil oppressors" makes war necessary to bring about freedom for the oppressed.

Ask students for their reactions, and see if they can think of other ways of looking at war.

3. Explain to students that whether a war is moral or immoral often depends on which theory of war is accepted by the society considering war. In order to show students that a specific case is viewed differently depending on the theory used, ask the following questions:

    - According to which theory or theories was the dropping of atomic bombs on Hiroshima and Nagasaki necessary? (You may have to explain the dropping of the atomic bombs very briefly.)

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   - According to which theory or theories was it morally justified?
   - According to which theory or theories was it morally wrong?
   - Can students think of other examples they found in their case studies which they would like to analyze? (ie. siege machinery, torpedoes, poison gas?)

4. An additional point to raise along these lines is the notion of means vs. ends. Ask students:
   - What does the "ends justify the means" signify in the context of warfare? (Students should understand that the "ends" are the goals of warfare; the "means" are the weapons and strategies used to achieve the ends.)
   - What are some examples of nations or individuals demonstrating that *any* means were justified?
   - Where should a line be drawn--in warfare--on "means?" That is, according to your students, what means can never be justified?

5. In summary, ask students these open-ended questions:
   - Why are these issues important to consider?
   - Should nations pay attention to morality during war?

Meanings Of War

by Richard Wasserstrom

War is generally international, involving the use of deadly force in pursuit of what the combatants believe to be a just cause. War may be either a rule-bound, game-like activity, or an all-out attempt by one country to control another. The way it is perceived will be important to the moral judgment made of that war.

The first characteristic of war is that it generally takes place between countries, rather than smaller groups or individuals. Wars against poverty and disease are not wars in the literal sense.

Secondly, wars almost surely involve the use of violence--violence exercised under a claim of right. In any other situation, the same actions would be thought of as inhumane' and immoral.

The third and final characteristic of war is not really one feature but rather a choice between two different ones. For there are two distinct ideas of war:

1. War as a limited instrument of foreign policy
2. War as an unlimited fight between countries

Expanding the first of these ideas, war can be considered as nothing but a duel--only on a larger scale. It is hard to imagine a more rule-governed, stylized way of fighting than a duel. If war is a duel on a large scale, then war is a sort of game. War is one means to decide which of two or more countries shall win a particular dispute. When one side wins, this settles the dispute in the winner's favor and the war is over. This idea of war directly involves only armies. Further, it is carried on according to fairly well-defined and generally accepted rules that determine when it is appropriate to engage in war and how the "game" of war is to be played.

Examples of rules that relate to conditions under which war can be started can easily be found. One example is found in Article I of the Hague Convention Number 3 of 1907. It provides: "The Contracting Powers recognize that hostilities between them must not commence without a previous and explicit warning, in the form of either a reasoned declaration of war or of an ultimatum with a conditional declaration of war."

Illustrations of the formal rules relating to how a war is to be fought are plentiful. Two of the most famous are the Hague Convention Number 4 of

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Adapted from "On the Morality of War," by Robert Wasserstrom, The Stanford Law Review, Volume 21, page 1627. © 1969 by the Board of Trustees of the Leland Stanford Junior University. It was adapted by the Ontario Institute for Studies in Education and appeared as "Meanings of War" in War, 1979. Reprinted by the International Security and Arms Control Project of SPICE with permission of the author, Stanford University, and the Ontario Institute for Studies in Education.

1907 and the Geneva Convention of 1929. These prohibit such things as inhumane treatment of prisoners of war, the employment of poisoned weapons, and the improper use of flags of truce.

According to this view, then, war is a carefully defined and limited kind of combative activity that one country can carry on with one or more other countries. The circumstances under which war can properly be engaged and the ways in which it may be carried on are both subject to identifiable rules, standards and agreements of various sorts.

Alternatively, it has been suggested that war can be an act of force--and there is no limit to the use of that force. One example is, no doubt, Nazi Germany. The Nazi leaders rejected the idea of "chivalrous* warfare" and accepted the idea of "total war," in which the customs which try to make war more humane are not considered to be important. Rules, regulations and treaties, all alike, do not matter, and so, freed from the restraint of international law, the aggressive war was carried on by the Nazi leaders in the most barbaric* way. War crimes were committed when and where Hitler and his men thought them to be beneficial.

Though the Nazis were the model case, the behavior of all of the countries involved in the Second World War appears to have come very close to accepting the idea of total war. Even the United States apparently chose to ignore many, if not all, of the laws of war. On the grounds that they were involved in a fight to the finish with the Axis powers, there was no behavior that could properly be ruled out except on strategic grounds.

Even if the moral difference that separates these two notions of war and the attitudes that go with them is by no means certain, it is clear that if a war were actually to be fought according to all of the rules and standards of the "game" of war, the task of moral judgment would have to be different from that presented by a relatively ruleless war like World War II. It is important, therefore, that whenever relevant, we keep these two ideas of war distinct.

Vocabulary

chivalrous: relating to chivalry; valiant; honorable

barbaric: characteristic of a land, culture, or people alien and usually believed to be inferior to one's own

humane: marked by compassion or consideration of others

Study Questions

1. Is there a moral difference between war as a "limited instrument of foreign policy" and war as "an act of aggression?" If so, how would you describe it?
2. Is there a goal to war as a "limited instrument of foreign policy?" If so, what is it?
3. Is there a goal to "total war?" If so, what is it?

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My Lai

Introduction

The purpose of this lesson about the events at My Lai and the subsequent trial is twofold: to demonstrate to students some of the practical difficulties surrounding the rules of war and **international law**; and to use an example of a common kind of war fought since the advent of nuclear weapons made large-scale warfare more unthinkable. The dilemma of My Lai also reveals several questions about the nature of just war in the modern world. These are: (1) What are the duties of the individual soldier during wartime?; (2) To whom does he owe allegiance?; (3) What are the ethical rules of warfare, and how do they differ from the accepted moral standards of society during times of peace?; and (4) Is guerrilla warfare any less moral than the warfare of conventional armies?

Objectives

In this lesson, students will:

- review the key terms and concepts of war, considering how some of the meanings are colored by moral overtones
- reenact parts of the trial of Lt. Calley in order to understand why My Lai exemplifies a dilemma that both the individual and the nation must address during wartime

Materials

- one copy of Overhead #2: *Four Hypothetical Cases* (same as Handout #13) or one copy per student of Handout #13: *Four Hypothetical Cases* (see lesson plan)
- overhead projector and screen (optional; see lesson plan)
- one copy per student of Handout #14: "*My Lai*"
- one copy per student of Handout #15: "*The Verdict*"

Procedures: Day 7 (second half)

Hypothetical Cases: 10 minutes

1. Use Overhead #2 or distribute Handout #13, *Four Hypothetical Cases*. Ask individual students to answer (aloud) the questions based on the readings they have done so far.

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2. Discuss students' answers. Tell the class that these dilemmas actually occur during war and that they are going to look at a real historical event to see how the rules of war operated in that one case.

My Lai: 15 minutes

1. To prepare students for the My Lai case study, point out that the readings and discussions so far have not addressed the controversial issues surrounding guerrilla warfare. Ask students how guerrilla wars are different from the kinds of wars discussed so far.

   Write the students' answers on the chalkboard. Their descriptions of guerrilla armies should include some of the following:

   - not directly controlled by a central government; not dependent on supplies and materiel from a central government; a citizen army; sometimes part-time soldiers; rules of war not necessarily part of their code;

   - lives off the land; operates in small, loosely connected groups; soldiers often live among civilians rather than in military encampments;

   - has different, often less sophisticated weapons than does the regular army; large weapons are impractical because they cannot be hidden or moved without detection; fighting an occupying army, may be the government of its own country; or a foreign government.

   Ask students why citizens would form a guerrilla army, and ask them to generalize about how guerrilla war might affect civilians.

   Remind students that both guerrilla and regular armies have used guerrilla tactics.

   Inform students that the two combatants discussed in the article they will receive about My Lai are the US and the North Vietnamese armies. Although only the North Vietnamese were organized as a guerrilla army, both sides were forced to use guerrilla tactics. Refer to the list above so that students will see the differences in their methods of living and fighting. Point out that during the Vietnam War the US supported their soldiers with sophisticated technology and air power.

2. Inform students that the events which led up to the US involvement in the Vietnam War were long and complicated and that you will try to give them enough information for them to

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have a basic understanding ~~of~~ the Vietnam war. Read students the following information:

Read Aloud

> After World War II the United States, France, Britain, and the USSR developed and stockpiled nuclear weapons. Many people believe that the great threat posed by nuclear weapons has been responsible for the fact that we have not had a third world war. Instead we have seen a struggle for political influence in other countries between the capitalist nations of the West and communist nations in the East. Sometimes this rivalry forced the "East" and "West" to back opposite sides in civil wars, as happened in Vietnam.
>
> The civil war in Vietnam was fought between communist forces in the north and nationalist forces in the south. France, China, and the USSR aided various opposing factions. The US sent token aid to the South Vietnamese in the 1950s, and in the early 1960s began to send military equipment and military advisors. Soon after this, US troops were actively fighting North Vietnamese guerrillas infiltrating from the north. Although the Vietnamese war was one of the worst modern wars, it was never a declared war. It was fought by two different kinds of armies--indigenous guerrillas in the north, and regular South Vietnamese and US troops with modern equipment in the south.

3. Read the first paragraph of *My Lai* (Handout #14) aloud. Explain that the US Army had been sent into small South Vietnamese villages to look for the North Vietnamese guerrilla army, which often operated out of South Vietnamese villages. The North Vietnamese army had no front line and no massed battalions.

4. Distribute Handout #14 to students. Assign students to read this handout as homework. They should focus on the background to the trial, as well as the excerpts from the *US Army Field Manual*. Ask students to compare the rules outlined in the field manual to what they have learned about international rules of war.

   - How are the codes similar?

   - How are they different?

5. Cast four students in the parts of Narrator, Lt. Calley, Prosecuting Attorney, and Calley's Defense Attorney. Ask these students to prepare to read the trial excerpts aloud for the class as part of their homework. They should practice after class for this activity by reading their parts aloud.

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Procedures: Day 8

Discussion: 50 minutes

1. Have the four students read *My Lai* aloud to the class.

2. Ask the students what happened at My Lai. They should just recount the facts.

3. Ask the students why Calley and the men under his command killed all the inhabitants of the village. What internal and external forces guided their actions?

4. Ask the class to vote on Calley's actions as if it were a jury. Each student should write "guilty" or "not guilty" on a piece of paper and briefly write the reasons for their verdict. Count the votes and write the results on the board. Read some of the reasons students voted as they did.

5. Tell students you will now announce the actual verdict. Distribute Handout #15, *The Verdict*. Read it aloud. Ask students to look again at the sections of *My Lai* which contain excerpts from the *US Army Field Manual*. Of which crimes did the military court decide Lt. Calley was guilty?

   Ask students what some conclusions are that might be drawn about what the US military considers **war crimes**.

6. Have the student who read the part of Lt. Calley read Calley's last speech. Ask students the following questions:

   a. Does Calley understand why he is considered guilty?
   b. Does Calley think himself guilty as charged?
   c. Why does he not believe that he has committed a war crime? What is the difference between killing "communism" and killing "communists?"
   d. What was Calley's dilemma? What did he see as his highest duty?
   e. What could or should he have done differently, according to the US military?

7. Ask students if they think it is possible to make rules of war that will make certain that wars are fairly fought and that non-combatants are safeguarded.

Four Hypothetical Cases

Case #1:

As a new, young lieutenant in the US Army, you are ordered to take your platoon and attack a military camp, to kill all the enemy and to take no captives. Do these orders violate international rules of war?

Case #2:

As a US infantryman, a foot soldier, your platoon attacks a village where enemy troops are living mixed in among the civilians. What does international law require you to do about the civilians?

Case #3:

As a new, young US Army officer, you have been ordered to attack an enemy base only to find that the only inhabitants are unarmed women, children, and old men. What does international law require you to do?

Case #4:

As an officer in the US Army, you are newly arrived in a foreign country, having finished basic training and your first assignment. In the past two weeks, fourteen of your buddies from basic-training camp have been wounded or killed in the region. Your commanding officer ordered you to lay siege to a village camp suspected of waging guerrilla warfare and contributing to the US casualty rate. Tomorrow morning you and the platoon will head out for this village. What rules of conduct or rules for engagement will you enforce?

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Four Hypothetical Cases

Case #1:

If the enemy surrenders, these orders violate the Hague Conventions. In that case, international law would require you to refrain from killing or wounding the enemy and ask that you take them as captives.

Case #2:

The Hague Conventions stipulate that once an enemy territory is occupied, civilian honor and rights must be protected. Their lives, property, and religious convictions and practices must be respected.

Case #3:

Because this village is undefended, international law forbids you to attack it.

Case #4:

Should you discover that your suspicions were wrong (it is not a village camp for guerrillas), you must not harm the people. It is a violation of international law to attack an unarmed village. Instead, you must treat the people humanely and respect their rights as mentioned in Case #2.

If the village is in fact a camp for guerrillas, you must not continue your attack should the enemy surrender. At that time, you may take the guerrillas as prisoners of war. Their food, lodging, and clothing must be "on the same footing" as those of your troops.

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My Lai

The assault on the Vietnamese village of My Lai was reported at the time as a victory for the American forces. *The New York Times,* like many other American newspapers on March 17, 1968, gave front-page coverage to the assault. The *Times* article said, in part: "The operation is another American offensive to clear enemy pockets still threatening the cities. While the two companies of United States soldiers moved in on the enemy force from opposite sides, heavy artillery barrages and armed helicopters were called in to pound the North Vietnamese soldiers." The newspaper reports, based on information released through official channels in Saigon, noted that 128 enemy soldiers had been killed in the operation, two Americans had died, and ten had been wounded.

Then in the daily flood of news from Vietnam, Americans soon forgot about the assault on the hamlet known as My Lai 4. But the mission was not forgotten so quickly in Vietnam. Rumors began to spread among American soldiers that something out of the ordinary had happened at My Lai. Some of them called it "a turkey shoot." Others, depending on their points of view, described it as "a massacre."

A young helicopter gunner, Ronald L. Ridenhour, from Phoenix, Arizona, was among many GIs who heard the rumors about My Lai. He had a nagging suspicion that there might be some truth to the stories about a massacre. Flying over the hamlet a few days after the assault mission, he had seen a dead Vietnamese woman lying in a rice paddy–but no people or other signs of life.

After he was transferred to another unit, Ridenhour met soldiers who said they had been with the Army company that swept through My Lai. Their stories were similar. They had gone into My Lai, they said, with orders to destroy everything and everyone in sight. Even though "Charlie" Company (C Company, First Battalion, 20th Infantry Regiment, 11th Infantry Brigade, Americal Division) had encountered no hostile action, the GIs said they had killed every man, woman, and child in the hamlet. The story about a fierce battle with Viet Cong soldiers, they said, had been invented to make Charlie Company look good.

If it was true that military forces had killed unarmed civilians, the men of Charlie Company were guilty of acts defined in the *U.S. Army Field Manual* as war crimes. In 1968, the United States Command in Saigon issued the following directive: "It is the responsibility of all military personnel having knowledge or receiving a report of an incident or of an act thought to be a war crime to make such an incident known to his commanding officer as soon as possible."

Ridenhour continued asking questions. But fearing for his own security while in Vietnam, he said nothing and put nothing in writing. When he returned home to Phoenix in December 1968, nine months after the assault on My Lai, he was determined to do something about what he suspected had happened in the hamlet. He prepared a long letter, detailing the reports about My Lai. He sent copies to President Nixon; to key Senators and Congressmen; and to officials at the Pentagon, State Department, and Joint Chiefs of Staff.

"After hearing this account," Ridenhour wrote in the letter, "I couldn't quite accept it. Somehow I just couldn't believe that not only had so many young American men participated in such an act of barbarism, but that their officers had ordered it."

He concluded the letter with a plea for an investigation:

> Exactly what did, in fact, occur in the village of "Pinkville" (Charlie Company's special name for My Lai) in March, 1968, I do not know for *certain,* but I am convinced that it was something very black indeed. I remain irrevocably persuaded that if you and i do truly believe in the principles of justice and the equality of every man, however humble, before the law, that forms the very backbone that this country is founded on, then we must press forward a widespread and public investigation of this matter with all our combined efforts.

Within two weeks after receiving the letter, the Army Chief of Staff's office replied to Ronald Ridenhour: "Because the circumstances related in your letter concern events of a year or so ago, a proper investigation will take some time. This investigation is under way now."

The investigation continued in strict secrecy through the spring and summer. Finally, on September 5, 1969, Army press officers at Fort Benning, Georgia, announced that First Lieutenant William L. Calley, Jr., had been "charged with violation of Article 118 (of the Uniform Code of Military Justice), murder, for offenses allegedly committed against civilians while serving in Vietnam in March 1968."

The story aroused little interest. Those newspapers that did print the account buried it at the bottom of inside pages, drawing little or no attention to it. Then, more than a month after the press release, a free-lance writer, Seymour M. Hersh, received a telephone call from a Washington contact. Hersh later quoted his source as saying: "The Army's trying to court-martial some guy in secret at Fort Benning for killing Vietnamese civilians.."

Hersh immediately began his own investigation of the incident of My Lai, an effort that eventually earned him a Pulitzer Prize. On November 13, some of the most influential newspapers in the nation ran Hersh's story on their front pages. A week later the Cleveland *Plain Dealer* published gruesome photographs–which the newspaper said a former soldier had taken at My Lai–of sprawled bodies of men, women, and children. The next night, on the CBS evening news, a veteran of Charlie Company described in chilling detail what had happened to the people in the photographs.

The sensational disclosures of the events at My Lai set off a new Pentagon investigation, which finally involved 400 witnesses and more than 20,000 pages of testimony. The investigators heard that there had been in fact no military resistance at My Lai. There had not even been any male occupants in the village, except boys and old men. Yet, witnesses said,

From War Criminals, War Victims by Betty Reardon, 1974, pp. 39-50. Reprinted with permission of the World Policy Institute, New York, NY by the International Security and Arms Control Project of SPICE.

Charlie Company soldiers had wiped out virtually every person they encountered. When Army investigators searched the area, in November 1970, they uncovered three mass graves and a ditch filled with bodies. An exact count was not possible, but the Army team estimated that between 400 and 500 people had died at My Lai.

Eventually, 25 officers and enlisted men were charged with violations of military law in connection with the My Lai incident. Some had been there themselves. Many were officers accused of covering up information about the incident at every level, from company headquarters up to division headquarters. Most were eventually acquitted or had the charges dropped. The case that held the center of attention, however, was still that of William Calley–charged personally with the premeditated murder of 22 Vietnamese civilians.

The Rules

The killing of Vietnamese civilians by American soldiers would be classified as a war crime under international law. In this courtroom, however, there were few references to war crimes or international law. This was a military court-martial, a domestic matter, in which the United States Army was trying one of its own members, Lieutenant William Calley, under United States military law. The charge, of course, would have been the same in any court–murder.

The trial lasted for months, the longest court-martial in American military history. It provided not only insights into the character of William Calley and the nature of the Vietnam war, but insights into the ways people think when there are only two categories–us and the enemy.

The following excerpts from the U.S. Army field Manual define, and prescribe punishment for war crimes. These are the points of military law, based on international legal agreements, conventions and treaties, against which Lieutenant William Calley was being tried.

U.S. Army Field Manual: Excerpts

§ 506. Suppression of War Crimes

(a) *Geneva Conventions of 1949.* The Geneva Conventions of 1949 contain the following common undertaking:

The High Contracting Parties undertake to enact any legislation necessary to provide effective penal sanctions for persons committing, or ordering to be committed, any of the grave breaches of the present Convention defined in the following Article.

Each High Contracting Party shall be under the obligation to search for persons alleged to have committed, or ordering to be committed, such grave breaches, and shall bring such persons, regardless of their nationality, before its own courts. . . .

(c) *Grave Breaches.* "Grave breaches" of the Geneva Conventions of 1949 and other war crimes which are committed by enemy personnel or persons associated with the enemy are tried and punished by United States tribunals as violations of international law.

If committed by persons subject to United States military law, these "grave breaches" constitute acts punishable under the Uniform Code of Military Justice. . . .

§ 507. Universality of Jurisdiction

(a) *Victims of War Crimes.* The jurisdiction of United States military tribunals in connection with war crimes is not limited to offenses committed against nationals of the United States but extends also to all offenses of this nature committed against nationals of allies and of cobelligerents and stateless persons.

(b) *Persons Charged with War Crimes.* The United States normally punishes war crimes as such only if they are committed by enemy nations or by persons serving the interests of the enemy State. Violations of the law of war committed by persons subject to the military law of the United States will usually constitute violations of the Uniform Code of Military Justice and, if so, will be prosecuted under that Code. . . . Commanding Officers of United States troops must insure that war crimes committed by members of their forces against enemy personnel are promptly and adequately punished.

§ 508. Penal Sanctions

The Punishment imposed for a violation of the law of war must be proportionate to the gravity of the offense. The death penalty may be imposed for grave breaches of the law. . . .

§ 509. Defense of Superior Orders

(a) The fact that the law of war has been violated pursuant to an order of a superior authority, whether military or civil, does not deprive the act in question of its character of a war crime, nor does it constitute a defense in the trial of the accused individual, unless he did not know and could not reasonably have been expected to know that the act ordered was unlawful. In all cases where the order is held not to constitute a defense to an allegation of a war crime, the fact that the individual was acting pursuant to orders may be considered in mitigation of punishment.

(b) In considering the question whether a superior order constitutes a valid defense, the court shall take into consideration the fact that obedience to lawful military orders is the duty of every member of the armed forces; that the latter cannot be expected, in conditions of war discipline, to weigh scrupulously the legal merits of the orders received; that certain rules of warfare may be controversial; or that an act otherwise amounting to a war crime may be done in obedience to orders conceived as a measure of reprisal. At the same time it must be borne in mind that members of the armed forces are bound to obey only lawful orders. . . .

§ 510. Government Officials

The fact that a person who committed an act which constitutes a war crime acted as the head of a State or as a responsible government official does not relieve him from responsibility for his act.

§ 511. Acts Not Punished in Domestic Law

The fact that domestic law does not impose a penalty for an act which constitutes a crime under international law does not relieve the person who committed the act from responsibility under international law.

The Trial

Narrator:

In the following excerpt from the trial testimony, Lieutenant Calley is on the witness stand testifying in his own behalf. He is questioned first by his own defense counsel, and then by the prosecutor. Calley has been claiming that whatever he did was under orders from his company commander, Captain Ernest Medina. Here Calley answers questions by his defense counsel about briefings Medina held before the My Lai action:

Calley and his Defense Counsel:

Q. Did he make any comments about the civilians, as to what they might be?

A. Well, the only remark he made . . . about civilians was that . . . all civilians had left the area, there were no civilians in the area. And anyone there would be considered enemies.

Q. Now, did you have a second briefing?

A. Yes, sir, we did.

Q. And who attended the second briefing?

A. Platoon leaders, basically.

Q. And who conducted that briefing?

A. Captain Medina, sir.

Q. Did he make any comments there about the manner of operation, what should be done in connection with turning out the area (clearing it of people), or in connection with what should be made certain in regards to the mission?

A. Yes, sir. He re-emphasized on us, on platoon leaders, that under no circumstances would we let anyone get behind us, nor would we leave anything standing in these villages. At least we would get out with what we had and we wouldn't be entrapped. That it was of the utmost to keep the high speed of attack going on. Platoon leaders would not stop for their own wounded. If a man went down, you had to keep going; Third Platoon would pick up casualties.

Q. Now, going back to the principal briefing of the company, do you have any recollection of anybody asking Captain Medina a question about who were civilians?

A. I believe there was a question raised.

Q. What is your recollection?

A. I believe somebody asked if that meant women and children, sir.

Q. Did Captain Medina respond to that question?

A. Yes, sir.

Q. What did he say?

A. He said that meant everything. He said that–he said he meant everything.

Q. Was anything said at that briefing–had anything been told to you about the nature of this area, specifically, whether it was classified by either being or not being a free-fire zone?

A. As long as I have known the area, this area was in the general classification of the word of free-fire zone (a zone in which soldiers may fire at will without waiting for orders).

Q. In the briefing with the platoon leaders, was there anything said at that briefing by Captain Medina about what to do with the prisoners?

A. No, sir, there wasn't.

Q. Was there a policy that had developed in that area . . . in connection with the use of Vietnamese in connection with clearing minefields?

A. I don't think it was said. It was understood when we made our final assault . . . we would have had civilians pulled in front of us, yes, sir.

Q. And what was the purpose for that?

A. Clear the minefields, sir.

Lieutenant Calley told about relaying orders to his men to "waste"–that is, kill–all captives. But at first he denied shooting at civilians himself.

Q. I will ask you whether during that operation you at any time consciously conceived or set down and formed an opinion to waste any man, woman, or child, Vietnamese?

A. No, sir, I didn't.

Q. Now, did you intend on that occasion to waste something?

A. To waste or destroy the *enemy*.

Q. Were you motivated by other things besides the fact that those were enemy?

A. Well, I was ordered to go in there and destroy the *enemy*. That was my job on that day. That was the mission I was given. I did not sit down and think in terms of men, women, and children. They were all classified the same and that was the classification that we dealt with, just as enemy soldiers.

Q. Who gave you that classification, the last time you got it?

A. Captain Medina, sir.

Q. And what did he tell you in connection with that?

A. That everybody in that area would be the enemy and everyone there would be destroyed. All enemies would be destroyed.

Narrator

Then, under questioning by the prosecutor, Calley admitted that he had fired at Vietnamese people piled into a ditch:

Calley and the Prosecutor:

Q. How long did you fire into the ditch?

A. I have no idea, sir.

Q. How many shots did you fire?

A. Six to eight, sir.

Q. One burst or semi-automatic?

A. Semi-automatic.

Q. Who did you fire at?

A. Into the ditch, sir.

Q. What at in the ditch?

A. At the people in the ditch, sir.

Q. How many people were there in the ditch?

A. I don't know, sir.

Q. Over how large an area were they in the ditch?

A. I don't know, sir.

Q. Could you give us an estimate as to how many people there were in the ditch?

A. No, sir.

Q. Would you say it was a large group?

A. No, sir.

Q. You said yesterday, I believe previously, that you considered six to eight to be a large group?

A. Right, sir.

Q. Would you say it was six to eight?

A. I don't know, sir.

Q. You have no idea how many people you saw there?

A. No, sir, I don't know. I don't.

Q. What were these people doing as they were being fired upon?

A. Nothing, sir.

Q. Were they being hit?

A. I would imagine so, sir.

Q. Do you know?

A. I don't know if they were being hit when I saw them, no, sir.

Q. Do you know if you hit any of them?

A. No, sir, I don't.

Q. How far away were you from them when you fired?

A. The muzzle would have been five feet, sir.

Q. You didn't see the bullets' impact?

A. Not that I recall, no, sir.

Q. How do you know these people were dead when you left the ditch there?

A. I don't know, sir, that they were, sir.

Q. Didn't you say yesterday that they were apparently all dead?

A. I said they were apparently all dead, but I don't know exactly if they were dead, sir.

Q. Why were they apparently dead?

A. They were lying still and weren't moving.

Q. You don't know whether any of your men fired into the ditch?

A. No, sir, I wasn't paying attention to where they were firing, how they were firing, how they were holding their weapons. My main thing was–go on, finish off those people as fast as possible and get my people out into position, sir.

Q. Did you tell Captain Medina that you had shot the people in the ditch?

A. Yes, sir, I did.

Q. Did he ask any facts about that?

A. No, sir.

Q. How did you tell him about it?

A. He asked–well, after the higher (superior officer) called back and asked–I said it had been reported that a lot of civilians were killed in the area. He wanted to know what the percentage of civilians was.

Q. What did you tell him?

A. I told him he would have to make that decision, sir.

Q. Is that what you told him–those were your exact words to the captain?

A. Yes, sir.

Q. The group of Vietnamese that your platoon had, were all of them killed in the ditch?

A. I don't know, sir.

Q. Let me ask you this: Did you have any saved up for the minefield?

A. No, sir, I did not.

Q. Did you testify that you received an

order to save some of them for the minefield?

A. Yes, sir. I did.

Q. Why didn't you save some up for the minefields?

A. Captain Medina rescinded that order and told me to waste them, sir.

Q. All right, now, what's the substance and effect of the conversation you had with Captain Medina in connection with your failure to move?

A. Well, I was still in the same basic location, and Captain Medina more or less called me and asked me why I had disobeyed his orders and hadn't moved out as he had directed me to do. And I told him again that I was moving as fast as I possibly could, and I was checking these bunkers in the southern part of the village, and that I still had Vietnamese people there, sir, that were slowing me down.

Q. And what did Captain Medina tell you?

A. Basically, the hell with bunkers. Waste the people and get your people out of there.

Q. Now, at any time did you stop and consider the legality or illegality of those orders?

A. No, sir.

Narrator

Interviewed while awaiting the verdict of the military jury, Lieutenant Calley told a reporter he hoped the My Lai case would bring attention to the terrors of war:

> The thing that makes My Lai so unique, it was a small tragedy in a small place, but for once, man was able to see all the hells of war at once.
>
> I can't say I am proud of ever being in My Lai, or ever participating in war. But I will be extremely proud if My Lai shows the world what war is and that the world needs to do something about stopping war.
>
> Many people say war is hell who have never experienced it, but it is more than hell for those people tied up in it.
>
> I am hopeful that My Lai will bring the meaning of war to the surface not only to our nation but to all nations.
>
> My recommendation is that this nation cannot afford to involve itself in war.

The Verdict

On March 29, 1971, Lieutenant Calley was found guilty of the charges against him. Here is part of the statement he made after the verdict was announced:

> I'm not going to stand here and plead for my life or my freedom.
>
> But I would like you to consider a thousand more lives that are going to be lost in Southeast Asia, the thousands more to be imprisoned, not only here in the United States, but in North Vietnam and in hospitals all over the world as amputees.
>
> I've never known a soldier, nor did I ever myself, ever wantonly kill a human being in my entire life. If I have committed a crime, the only crime I've committed is in judgment of my values. Apparently I valued my troops' lives more than I did that of the enemy.
>
> When my troops were getting massacred and mauled by an enemy I couldn't see, I couldn't feel, and I couldn't touch . . . nobody in the military system ever described them as anything other than Communism.
>
> They didn't give it a race, they didn't give it a sex, they didn't give it an age. They never let me believe it was just a philosophy in a man's mind. That was my enemy out there.
>
> And when it became between me and that enemy, I had to value the lives of my troops–and I feel that was the only crime I have committed.

Discussing the Issues

1. Do you think the trial of Calley, and the world-wide exposure of the My Lai incident in the press and on television, will help to prevent similar incidents in the future? Why or why not?
2. Some people said that Calley's conviction tended to put the blame for war crimes on the servicemen closest to the fighting–the infantrymen who must make the most difficult decisions under the most dangerous conditions. A bomber pilot is not asked to make similar judgments–or to take the blame for his actions. Do you believe that pilots whose bombs kill civilians should be tried for war crimes? Why or why not?
3. Some people saw Calley as the scapegoat for the guilt of higher military and political officials–or even for the "collective guilt" of the American people as a whole. What do you think about collective guilt? Are the citizens of a nation, such as Nazi Germany, responsible for war crimes if, as individuals, they do nothing to prevent them?
4. There was a great deal of other evidence presented in the Calley trial in addition to the material given in this book. Longer excerpts may be found in the *New York Times* of February 24, 1971. On the basis of the excerpts available to you, in this book or elsewhere, what verdict would you have reached if you had been a judge at his trial? Why?

Defining Principles

1. One way to enforce international laws governing individual responsibilities in wartime is to make the nation-states themselves responsible for enforcement. The *Geneva Conventions on the Law of War* –revised August 12, 1949, and signed by 58 nations–did just that. These nations agreed to require their own citizens to obey the Geneva Conventions, just as if these were their own national laws. The *U.S. Army Field Manual,* which Lieutenant Calley should have been familiar with, states how the Geneva Conventions apply to members of the U.S. Army. Excerpts appear in this book. Read especially § 507 and § 509. Is the wording of § 509 (b) an adequate guideline about what to do if one is ordered to commit an act that might be considered a war crime?
2. Nation-states obey international law on a voluntary basis. What do you think are the practical advantages and disadvantages of enforcing international law through national legal systems?

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Related Activities

We have provided lists of related activities to offer teachers suggestions of how ideas within **The Evolution Of The Methods And Rules Of War** may be extended in both general and specific ways. In addition to a lengthy list of activities in social studies, activities in psychology and sociology, science, and language arts activities are provided below.

Social Studies

Any connections between these related activities for social studies classes and California's History/Social Science Framework and History/Social Science Model Curriculum Standards are indicated in parentheses.

Activities on General Topics

- We particularly encourage the use of role-plays and simulations as follow-up activities to this unit. You should choose an activity which suits your educational objectives. These are some of the many interactive activities from which to choose:

  "Draft," Ken Hogarty. Interact, Lakeside, CA. This simulation examines selective service by looking back into history and ahead through the 1980s. Students simulate a draft board during the Vietnam War and a congressional debate on a national service plan.

  "Judgment," Jonathan Harris, 1977. Interact, Lakeside, CA. This simulation is a mock trial of President Truman facing charges of war crimes for the atomic bombing of Hiroshima, followed by an analysis of a contemporary situation parallel to Truman's in order to discover the relevance of these issues today. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course, "United States History and Geography: Continuity and Change in the Twentieth Century" - Grade 11 course, and U.S. History and Geography Model Curriculum Standard 22)

  "Nuremberg," Arthur Pegas, 1972. Interact, Lakeside, CA. This simulation leads students to question what an individual ought to do when his government orders him to commit an act contrary to his beliefs and the beliefs of civilization.

  "The War Crimes Trials," David Dal Porto and John Koppel, 1974. History Simulations, Santa Clara, CA. In this simulation, the degree of guilt for crimes of aggression of war and against humanity is examined against the background of Nazi Germany and World War II.

- Research the theories of Machiavelli. (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

- Discuss the relationship between science/technology and society/ethics/values. (History/Social Science Framework "The Humanities" - Grade 9 course)

- Examine the international connections in war prevention, preparation, fighting, and resolution.

- Consider the change in the make-up of armies from professional soldiers or knights to drafted soldiers.

- Relate economic concepts such as opportunity costs and marginal analysis to the choice to allocate budget dollars to the purchase of weapons.

- Discuss the choices nations face in international conflict situations.

- Discuss the issue of military spending vs. social spending.

- Discuss the claim that some "revolutions, such as the French Revolution and communist revolutions, (are) followed by political purges and mass killings." Why are others, such as the American Revolution, followed by the establishment of democratic institutions and mechanisms for orderly change?" (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- Compare/contrast the strategies used in the Cold War with strategies used during "hot" or shooting wars. (History/ Social Science Framework "United States History and Geography: Continuity and Change in the Twentieth Century" - Grade 11 course)

- Quincy Wright argues that the "problem of organizing a world for peace is novel in human history. It could not even be thought of until all sections of the human family had come into contact with one another..." (A Study of War, p. 6) Evaluate this argument.

- Argue for or against one of the following statements by Quincy Wright:

  "War in the psychological sense began with organic nature." (A Study of War, p. 37)

  "War in the sociological sense could not exist as a distinct phenomenon before the emergence of human societies, permanently constituted through communication by language and accumulation of traditions." (A Study of War, p. 38)

> "War in the sense of a legal situation equally permitting groups to expand wealth and power by violence began with civilization." (A Study of War, p. 39)
>
> "War in the modern technical sense began with the period of world-civilization. All belligerent entities--animals, primitive peoples, and historic civilizations of the past--have, of course, had war techniques--weapons, tactics, and strategic ideas--but in the modern sense war means the use of firearms and chemicals for striking and of steam, gas, and electrical engines for military movement." (A Study of War, p. 39-40)

- Discuss political, economic, cultural, and religious motivations and interests related to modern wars.

- Study the fluctuations in the intensity of modern war.

- Discuss the following quotation: "War . . . has been the instrument by which most of the great facts of political national history have been established and maintained." (J.T. Shotwell, War as an Instrument of National Policy, p. 15)

- Discuss the following quotation: "War has been the method actually used for achieving the major political changes of the modern world, the building of nation-states, the expansion of modern civilization throughout the world, and the changing of the dominant interests of that civilization." (Quincy Wright, A Study of War. p. 250)

- Quincy Wright argues that the following are the characteristics which make modern war different from all earlier forms: mechanization of war; increased size of armies; militarization of the population; nationalization of the war effort; the totality of war (the breakdown of the distinction between armed forces and the civilians in military operations); and the intensification of operations. Research these characteristics. Do you agree with Wright's argument?

- Compare/contrast the following elements of Western European and Japanese culture in the High Middle Ages: "a feudal, lord-vassal system, with military leaders, great lords, and knights"; the emphasis on loyalty, military skills, a "code of honor, self-discipline, and fearlessness in battle." (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

- Show some of the following films: *What Price Glory?, All Quiet on the Western Front," "Henry V.," "Richard II," "Richard III," "Quest for Fire," "Tora! Tora! Tora!," "Apocalypse Now," "Platoon," "Full Metal Jacket,"* and *"Little Big Man".*

Activities on Weapons, Technologies, and Tactics

- Some historians note that warfare consists of tactics, strategy, and grand strategy. Define these terms and research the development of each throughout history. (Tactics have to do with how battles are fought as opposed to how wars are fought. Strategy refers to the movements and deployments of armies in wars. Grand strategy has to do with how civilian populations and the land itself are used to fight wars in addition to armies.) Some items to research include: Napoleon's use of concentrated artillery bombardment to weaken part of an enemy army's battle line (tactic); the movement of the Israeli army in the 1948-49 Arab/Israeli war to cut the Arab armies' lines of communications with their home bases (strategy); and General Sherman's destruction of cities during the American Civil War (grand strategy). Consider the claim that in the 20th century, the evolution of grand strategy has been the outstanding change in warfare. Also consider the claim that though weapons have changed, tactics and strategy have remained remarkably similar.

- Define the term "total war." One definition is: a war between two nations (including civilians) rather than simply a war between the armies of nations. Consider the claim that ancient wars were for the most part total wars. Examples include the Roman defeat of Carthage, the conquest of the island kingdom of Melos by the Athenians, and the Mongols' removal of whole populations of certain central Asian kingdoms.

- Discuss the role of professional soldiers in European wars of the 18th century. These soldiers fought for career purposes and not for causes.

- Discuss the role of grand strategy (or lack thereof) in the War of the Spanish Succession (1701-1713).

- Discuss the doctrine of strategic air attacks in World War II.

- Analyze the claim that during World War II the US waged a total war against the Japanese.

- Analyze modern examples of limited wars. Examples might include the Korean War, the US invasion of Grenada, and all the Arab/Israeli wars.

- Research the role of mobility and unpredictability in the tactics of Napoleon. Research the tactics of other commanders including Hannibal, Belisarius, and Genghis Khan.

- Research the role of military science in the organization of modern armies.

- Research the grand strategy of the communist forces in China's civil war.

- Review the history of weapons development in the ancient world. Look particularly at Rome, the Mayan civilization, the Inca civilization, the Aztec civilization, China, and Japan. (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

- Analyze the way in which the development of gunpowder affected China and the West. (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

- Analyze the methods used by the US in its territorial expansion of the 19th century. Focus on the Louisiana Purchase, the acquisition of East Florida, the westward expansion, and the northern expansion of the US. (U.S. History and Geography Model Curriculum Standard 24)

- Discuss the effect of the ideas of Alfred Thayer Mahan on the development of US seapower in the late 19th century.

- Discuss the effect of the ideas of William E. Mitchell on the development of US airpower in the mid-20th century.

- The weapons and methods of warfare introduced during the American Civil War may have had a strong influence upon the fundamental nature of that conflict. The Civil War is considered by some analysts as the first modern, total war in which civilians were targets. Discuss this claim. The historian Sir Basil Liddell Hart argued that "It was the supreme deadliness of Sherman's rear attack--against the rear of a people, not merely of an army--that set the two loyalties (the loyalties to country and family) in opposition, and so imposed a breaking strain on the will of the soldier." In addition, examine the "critical battlefield campaigns and the human meaning of the war in the lives of soldiers, free blacks, slaves, women, and others." (History/Social Science Framework "United States History and Geography: Growth and Conflict" - Grade 8 course)

- According to some analysts, new technologies, such as tanks, radar and sonar, substantially affected the courses of both World Wars, and technological differences were perhaps decisive in the Arab/Israeli wars and the Falklands/Malvinas War. Technological differences had surprisingly little influence on the courses of the Korean and Vietnam Wars although the methods of warfare during these two conflicts greatly affected the soldiers and civilians involved. Discuss these claims.

- Competition for technological advantage has been a major component of the Cold War, according to some analysts. Discuss this claim.

- Compare various revolutions in warfare technology.

- Discuss whether there is a relationship between the development of offensive and defensive technologies.

- In From Crossbow to H-Bomb, the authors state that the "invention of gunpowder had vastly increased the maneuverability of European armies, for as the medieval fortifications fell before the onslaught of the new artillery, war could no longer be compartmentalized and contained within one or several small feudal states." Discuss the main points of this observation. Are there parallels with other technologies?

- Analyze the transition in battlefield tactics seen from the American Civil War to the Boer War and on to World War I.

- In From Crossbow to H-Bomb, the authors state: "The coming of the railroad and the application of steam to the warship were the two most important strategic developments of the nineteenth century." Research this claim.

- In From Crossbow to H-Bomb, the authors state: "The rapidity of development of armor and guns helped speed changes in existing power relationships. Because of the rapid obsolescence of ships, four nations which had never before been influential maritime powers reached positions of naval eminence by essentially moderate efforts." Discuss the relationship between technological advancement and the balance of power.

- Research the particular contributions to weapons and strategies of war made by non-European societies and nations.

- Research the particular contributions made by Europeans to improving the weapons and strategies of war. Topics could include Napoleon, levee en masse, just war theory, Blitzkrieg, and professional armies. Also consider a European example (such as Nuremberg) when focusing on war crimes.

- As mentioned at the beginning of Day 1, the technology of war includes more than weapons. Address the impact of scientific/technological advancements such as chariots, compasses, armor, radios, and radar on the nature of war. What new battle strategies were developed as a result of this new technology? How would this technology yield a significant advantage against an enemy who lacked it?

Activities on Ethical, Legal, and Religious Issues

- Discuss George Kennan's argument that the US's foreign policies from 1900-1950 were legalistic and moralistic in nature. Because of this approach, Kennan concludes, US wars in 1898, 1917, and 1941 were "crusades for democracy and eternal peace, rather than attempts to pursue coherent and realistic policies in defense of a well defined national interest." (Quoted in America Challenged 1916-1945, Kenneth S. Mackenzie, p. 12.)

- Research the United Nations' role in the development and enforcement of international laws on war and weapons. Two contemporary studies include the use of chemical weapons in the Iran-Iraq War, Iranian mining of the Persian Gulf, and the US mining of Nicaragua's harbors.

- Discuss whether it is ever right to violate the rules of war. For example, if your nation is engaged in a war with another nation and believes the enemy is violating the rules of war about the treatment of prisoners, how do you think your nation should treat its prisoners from the other side?

- From legal and ethical perspectives, discuss these two cases in which advanced weapons weren't used: Korea (nuclear weapons) and World War II (chemical weapons). Was there a contradiction between Germany's activities in concentration camps and its activities on the front?

- Consider the ethical questions surrounding weapons development. (History/Social Science Framework "The Humanities" - Grade 9 course)

- Discuss the effect on the pope of the Byzantine Empire's political claims on Rome in the ninth century. Who did the pope turn to for protection against these claims?

- Research the control over Church lands Charlemagne acquired in the ninth century. When Church-owned lands were given to vassals, what was the response of the village abbots?

- Explain the meaning of the following statement: "Since most thinkers were ecclesiastics, early medieval thought betrayed a clerical bias that both encouraged religiously-motivated wars and cast suspicion on the morality of most acts of violence." (Frederick Russell, The Just War in the Middle Ages, p. 27.)

- Research the following claim regarding knighthood in the Middle Ages: "Knighthood was a way of life, sanctioned and civilized by the ceremonies of the Church until it was almost indistinguishable from the ecclesiastical orders of the monasteries." (Michael Howard, War in European History, pp. 4-5.)

- Research the following statement: As a result of the external invasion and internal strife which threatened the Frankish kingdom after Charlemagne's death, "the Frankish episcopate came to see itself as a separate estate that was constantly subjected to violence at the hands of the feuding heirs of Charlemagne." (Frederick Russell, The Just War in the Middle Ages, p. 29.)

- Research the following statement: Around the middle of the ninth century, Carolingian writers encouraged wars to defend the empire and Christianity through expansion and conversion.
- Research the following claim: By the ninth century, "the goal of the Carolingian holy war had been revalued from aggression to defense . . . (One writer) contradicted the earlier ecclesiastical involvement in Carolingian wars, but nevertheless his solution to internal violence was the holy war, justified as before by the clergy but now to be waged without its active participation." (Frederick Russell, The Just War in the Middle Ages, p. 30.)
- Research the following claim: In the ninth century, "the endemic violence likewise influenced ecclesiastical attitudes toward military service in general . . . These equivocal, incomplete and often inconsistent opinions indicated a hollowness of conviction about Carolingian warfare and its providential role . . . With the Empire now split into warring camps of orthodox Christians, the just war was bound to atrophy at the hands of a now querulous and frightened clergy." What evidence is there for this last prediction? (Frederick Russell, The Just War in the Middle Ages, pp. 30-31.)
- Research the following claim: The writings of popes in the ninth century "exhibited . . . ambivalence toward the legitimacy of warfare and the proper role of the clergy." Was the ambivalence a new papal attitude? (Frederick Russell, The Just War in the Middle Ages, p. 32.)
- Discuss the difference in Christian thought between the just war and the holy war.
- According to one scholar, for a just war theory to mature there must be three preconditions: national consolidation, monarchical government, and a system of military defense. Discuss why would these be preconditions. (R.H. Bainton as quoted in Frederick Russell, The Just War in the Middle Ages, p. 3.)
- Research in detail St. Augustine's theories of just war. What examples of wars did he examine and which were considered just wars?
- Explore the role of religion in violent conflicts of the Middle Ages. Examples include: the Crusades, the expulsion of Jews from England in 1290, the expulsion of Jews from France in 1306 and 1394, the conflicts between Christians and Moslems in Spain beginning in 1085, and the Spanish and Portuguese inquisitions. (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

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- Compare/contrast the teachings of various religions about war. (History/Social Science Framework "Comparative World Religions" - Grade 9 course)

- Discuss the role of legal institutions and laws in attempting to end international and intranational violence/war. (History/Social Science Framework "Law-Related Education" - Grade 9 course)

- Examine the perspectives of Plato and Aristotle on the issue of war. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- Discuss the laws of war as established by: Plato, Aristotle, Cicero, Augustine, Isadore, Hostiensis, and Aquinas.

- Examine the Shimoda Lawsuit and whether the atomic bombings of Japan violated international law and whether individuals had claim to damages for injuries suffered in the bombings.

- Research Japanese-American internment in the US during World War II.

- Discuss the topic of conscientious objectors.

- Discuss the role of universities and individuals in military research.

Activities on World War I

- Analyze the role of the four great innovations of World War I: the airplane, the tank, poison gas, and the submarine. Which was the most revolutionary? Which was the most decisive? Which were completely new? (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- Discuss US domestic opposition to World War I. (History/Social Science Framework "United States History and Geography: Continuity and Change in the Twentieth Century" - Grade 11 course)

- Discuss the extent to which World War I threatened American institutions and security. Evaluate arguments relating to (a) a German victory forcing the US to give up its ideals and system of government; (b) Germany's destruction of the balance of power that had protected American interests; and (c) definitions of US national security.

- Evaluate these statements: "The American people were neither historically nor psychologically equipped to comprehend the issues and the possible consequences of a world war. American leaders, including President Woodrow Wilson, were equally unprepared and inadequately explained the facts of international life to the public." (Kenneth S. Mackenzie, America Challenged 1916-1945, p. 2.)

- Research the three Balkan crises preceding World War I. To what extent do the first two crises--a revolution of the Young Turks against Abdul Hamid and the creation of the independent kingdom of Albania--affect the third crisis?

- Research the demands Austria made on the Serbian government after the assassination of Francis Ferdinand.

- Discuss the following: "While people today accept the submarine as an integral part of a nation's defense system, (US President) Wilson cried out at the time of the Lusitania's sinking, 'In God's name, how could any nation calling itself civilized propose so horrible a thing?'"

- According to one historian, "those who joined the war did so with a clear conscience, blaming its outbreak on their enemies. Although the participants would eventually proclaim major war aims once the first battles had been fought and popular opinion came to insist upon total victory, none of the leaders really knew what they were fighting about in August 1914." (Kenneth Mackenzie, America Challenged 1916-1945, p. 7.) Research how each nation's leader justified his nation's involvement in the war.

- One historian argues that the American people had to face the challenge of entering World War I with well defined ideals rather than anger or the desire for revenge. Research President Wilson's speech to the US Congress on April 2, 1917, the response of the US public to the speech, and the response of congressmen to the speech. (Kenneth Mackenzie, America Challenged 1916-1945, p. 33.)

- Consider Senator Robert LaFollette's response to Wilson's speech to the US Congress on April 2, 1917. One historian describes LaFollette's response and his beliefs as follows: he and his progressive allies "believed the President and the American people had been deceived about the war . . . (They believed the) causes of the European war could be traced to the greed and desire for power by the forces of 'financial imperialism.' In America, the bankers and munitions makers had whipped up the war fever in order to make huge profits . . . They also believed that Americans had been duped by the propagandists into believing that the Allies fought for democracy and the survival of civilization." (Kenneth Mackenzie, America Challenged 1916-1945, p. 34.) Evaluate the claims of LaFollette and other progressives.

- Discuss the following claim: The image of World War I "which later developed in Europe as a period of almost unrelieved horror was not shared by many of the soldiers themselves when they returned to a post-war world which was for many of them disappointing and drab and for some one of real deprivation." (Michael Howard, War in European History, p. 117.)

Activities on World War II

- Discuss the technical, political, organizational, military, and ethical issues involved in the evolution of a strategic bombing doctrine by various nations during World War II.

- Examine the similarities and differences in the Nuremberg and Tokyo war crimes trials after World War II. Some questions to consider include: what were the main legal, ethical, and political issues of the trials? What role did the tribunals play in upholding international law? What were the outcomes of the trials? Why does the Tokyo war crimes trial remain relatively obscure? (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- Discuss wartime strategy and major military operations during World War II. Consider also the differing historical judgments of Truman's decision to drop atomic bombs on Japan. (History/Social Science Framework "U.S. History and Geography: Continuity and Change in the Twentieth Century" - Grade 11 course)

- Consider the claim that World War II was marked by an "egalitarian ideology." (History/Social Science Framework "U.S. History and Geography: Continuity and Change in the Twentieth Century" - Grade 11 course)

Activities on Nuclear/Atomic Issues

- Consider what relationship, if any, there was between the Korean War and the US expansion of atomic bomb production.

- Discuss the conclusion of the authors in From Crossbow to H-Bomb: "the effects of the marriage of nuclear weapons to missiles of all sizes. . . has meant a military revolution distinct from and almost comparable to the revolution introduced by the nuclear weapons themselves."

- Discuss the revolutionary advancement of the H-bomb over the A-bomb. In what ways, if any, was this revolution scientifically, militarily, or politically significant? (U.S. History and Geography Model Curriculum Standard 22)

- Do you agree or disagree with the following argument in From Crossbow to H-Bomb: "Between opponents who possess substantial stores of atomic weapons and the means of delivering them there can no longer be positive objectives in war, only negative ones, like avoiding being overrun or overwhelmed."

- Do you agree or disagree with the following argument in From Crossbow to H-Bomb: "Today the most important force that a great nation . . . must have (is) its striking force, which is wholly offensive and not at all defensive except insofar as it succeeds in deterring war--or, possibly in destroying the enemy before he can retaliate."

- Do you agree or disagree with the following argument in From Crossbow to H-Bomb: " . . . in some important respects (thermonuclear weapons) tend to make war more likely."

- Discuss the issue of proliferation of nuclear weapons. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

Psychology and Sociology

Any connections to California's History/Social Science Framework are indicated in parentheses.

- Consider the following drives which may have influenced historic wars: food, sex, territory, adventure, self-preservation, domination, independence, and society. (These drives are listed in Quincy Wright, A Study of War.)

- The author of A Study of War argues that there are four changes leading more people to see war as a problem: "the shrinking of the world, the acceleration of history, the progress of military invention, and the rise of democracy." (p. 3) How would you assess this argument?

- Have students read and discuss "The Perils of Obedience," by Stanley Milgram in Harper's, December 1973, pp. 62-77. Ask students what are the implications of this study for establishing and enforcing laws which hold soldiers responsible for their actions in war? To what authority do we owe our obedience? (History/Social Science "Psychology" and "Sociology" - Grade 9 course)

- Consider past war crimes trials and war-time drafts from the point of view of the individual and society. (History/Social Science "Psychology" - Grade 9 course)

- Consider whether the impact of Freudian psychology was enhanced as a result of World War I. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

Science

Any connections to California's Science Model Curriculum Standards are indicated in parentheses.

- Discuss the impact of scientific/technological advances such as chariots, the compass, armor, radios, and radar on the nature of war. What new strategies were developed as a result of this new technology? How would this technology yield a significant advantage against an enemy who lacked it?

- Consider the relationship between scientific technology and weapons development. Some people argue that modern technology has done more to promote warfare than it has done to promote peace; others argue that science has been advanced by the pursuit of better war technology. Should the aims of science include improvement of the methods of killing? What should be the relationship between science/technology and weapons research/development? If a weapons technology is discovered, will such technology necessarily be researched and later deployed?

- Consider the role of scientists in weapons development.

- Consider the current role of computers in war prevention and war fighting.

- Research the stories of many scientists who have withheld knowledge of their discoveries or designs of weapons from others. Examples include Roger Bacon and gunpowder, Leonardo da Vinci and the submarine, and Niccolo Tartaglia and ballistics.

- Research which fields of science have had impacts on the technology of war.

- Research the role of governments in encouraging (by many methods) scientists to do basic and applied research in hopes that scientific discoveries will improve the technology of warfare.

- Discuss the impact the science of nursing had on warfare. (Biological Science Model Curriculum Standard 17)

- In From Crossbow to H-Bomb, the authors state that: "With the 20th century we enter into a period when science becomes" intertwined with the technology of war. Discuss this claim. Compare the relationship of the 19th century with that of the 20th century.

- Research the utilization of scientists by Germany, Japan, Great Britain, and the US during World War I.

- Research the most important new scientific developments of World War II: the atomic bomb, radar, the proximity fuse, electronic fire control equipment, anti-submarine devices, incendiaries, and rockets. Did these new developments dominate the fighting?

- Discuss the degree of control and secrecy imposed upon scientists working on the Manhattan Project. Discuss the development of communities of scientists all working towards one goal.
- Discuss some of the continuing improvements in nuclear weaponry: reduction of warhead weight, development of MIRVs, and development of anti-missile missiles. (Physical Science Model Curriculum Standard 8)
- Convert the figures in grams on Handout #3A to joules.
- Convert the logarithmic scales of Handouts #11A-#11D to normal scales.
- Examine the role of electronics in the development of weapons. (Physical Science Model Curriculum Standard 16)
- Study animal warfare.
- Consider the transfer of the following technologies: (1) hand firearms that were first used by Spaniards, Hussites, and the Swiss in the fifteenth century were adopted by all in the early sixteenth century; and (2) the organization of the Turkish Janizary infantry was copied throughout Europe.

Language Arts

Any connections to California's English/Language Arts Framework and English/Language Arts and History/Social Science Model Curriculum Standards are indicated in parentheses.

- When examining literature relevant to the topics discussed in this unit, consider the following as points of analysis: the role of the individual (scientist, hero, military, government, medical) in war, the role of the state in war preparation and fighting, the role of ethics in war fighting. (English/ Language Arts Model Curriculum Standard 1)
- Discuss government propaganda during World War I. In particular, research the euphemisms used by the British government (for example, "means of an explosive nature" in place of "bomb," "Alsatian" in place of "German shepherd dog," "Liberty Cabbage" for sauerkraut, "going out of it" in place of "getting killed," and "died of wounds" in place of "executed for acts prejudicial to military discipline").
- Analyze the language of warfare, nuclear weapons, and war prevention. Discuss the contention of "nukespeak" theorists that the language of nuclear weapons and strategy ("nukespeak") desensitizes people to the death and destruction which would occur in a holocaust. (English/Language Arts Model Curriculum Standard 2)

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- Discuss the names given to various technologies of warfare. Some examples include: Demologos (the name of the first steam warship), the Peacekeeper (the name of the MX Missile), Devastation (the name of the first modern battleship), and the Holy Moses (one of the first high velocity aircraft rockets). (English/Language Arts Model Curriculum Standard 8)

- Discuss how war is portrayed in the writings of Shakespeare, Cervantes, Machiavelli, and Dűrer. (History/Social Science Framework "World History and Geography: Medieval and Early Modern Times" - Grade 7 course)

- Analyze the propaganda and "false reports of German atrocities" during World War I. Also analyze German propaganda. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- As part of a discussion of President Truman's decision to use the atomic bomb against Japan, read Hiroshima by John Hersey, newspaper accounts, and autobiographical statements of those involved. (History/Social Science Framework "World History, Culture, and Geography: The Modern World" - Grade 10 course)

- Read the history of the Peloponnesian War. A good source for this is Thucydides's The Peloponnesian War. Read Pericles's Funeral Oration (in the same work).

- Read some of the many literary works which address topics such as new weapons and methods of warfare, war generally, soldiers and civilians, and war. Among the novels partly addressing these topics are The Red Badge of Courage (Crane, American, on the American Civil War), All Quiet on the Western Front (Remarque, German, on World War I), Quiet Flows the Don (Solokhov, Soviet, on World War I, The Russian Revolution and The Russian Civil War), and Dispatches (Herr, American, on the Vietnam War).

- See some of the films which depict the impact of technology and war methods upon people. These include *"Das Boot"* (German, on the U-boat warfare of World War II), *"Gallipoli"* (Australian, on World War I), *"Tora! Tora! Tora!"* (American/Japanese, on World War II) and *"Platoon"* (American, on the Vietnam War).

- Compare and contrast various definitions of war.

Connections To Textbooks

The Evolution Of The Methods And Rules Of War may be easily and appropriately used in conjunction with many social studies textbooks (US history, European history, and world history), many science textbooks, and other teaching materials. Suggestions for use of this supplementary unit are below.

This unit may also be adapted in many ways to be used in conjunction with a variety of textbooks and other teaching materials in social studies, science, psychology, sociology, and language arts courses. Suggestions for adaptation are found in Appendix A (Related Activities).

Social Studies

This unit may be integrated into discussions of the following textbook topics: the Stone Age, ancient Greece, the early and late Middle Ages, the Mongols, World War I, World War II, Nuremberg and Tokyo War Crimes Trials, Hiroshima and Nagasaki, the Vietnam War, chemical weapons, nuclear weapons, tanks, airplanes, machine guns, submarines, radar, and the relationship between science, technology, and society.

Science

This unit may be integrated into discussions of the following textbook topics: technological development, the development of internal combustion engines; the development of airplanes, ships, submarines, aircraft carriers, and land vehicles (such as tanks); the development of electromagnetic wave and sound wave technology (including radar and sonar), the development of communications technology, the development of chemical technology (including fuels and poisonous gases), the development of optical technology (including lasers and satellite surveillance technology), the development of computers, the development of the A-bomb and H-bomb, the development of other specific weapons, defensive vs. offensive weapons systems; and the relationship between science, scientists, and society.

Connections To California's Frameworks And Model Curriculum Standards

As a service to California educators, we have described below the ways in which **The Evolution Of The Methods And Rules Of War** ties into the History/Social Science Framework, the History/Social Science Model Curriculum Standards, and the Physical Science Model Curriculum Standards.

History/Social Science Framework

This unit can be utilized in the following history/social science goal and curriculum strands:

Knowledge and Cultural Understanding: historical literacy, ethical literacy, and sociopolitical literacy.

Skills Attainment and Social Participation: basic study skills and critical-thinking skills.

Democratic Understanding and Civic Values: civic values, rights, and responsibilities.

This curriculum unit, in its entirety or in separate lessons, can be used as is or adapted to supplement textbooks and other teaching materials in these courses: World History and Geography: Medieval and Early Modern Times (grade seven), United States History and Geography: Growth and Conflict (grade eight), Comparative World Religions (grade nine), Humanities (grade nine), Psychology (grade nine), Sociology (grade nine), Law-Related Education (grade nine), World History, Culture, and Geography: The Modern World (grade ten), United States History and Geography: Continuity and Change in the Twentieth Century (grade eleven), Principles of American Democracy (grade twelve), and Economics (grade twelve).

The adaptations are listed in detail in Appendix A (Related Activities). Listed below are some ways in which this curriculum unit directly supports the Framework.

World History and Geography: Medieval and Early Modern Times

The Framework calls for the study of the Germanic tribes with attention to the role of Clovis, a Christian Frank; the Middle Ages with attention given to the Church; the Mongol Ascendancy; Chinese inventions such as gunpowder; and the transmissions of ideas, beliefs, and scientific developments. All of the topics are covered in the first lesson of this curriculum unit. Furthermore, two aspects emphasized in the Framework--reconstructing the past and linking past to present-- are also emphasized in this curriculum unit.

The Humanities

The Framework calls for a humanistic approach to science and technology. This approach is evident in the first lesson of this curriculum unit.

World History, Culture, and Geography: The Modern World

The Framework calls for the study of the Industrial Revolution, World War I, and World War II. These topics are discussed in lesson one of this curriculum unit.

United States History and Geography: Continuity and Change in the Twentieth Century

The Framework calls for the study of World War I and World War II. These topics are discussed in lesson one of this curriculum unit.

History/Social Science Model Curriculum Standards

Adaptations of this curriculum unit to meet the History/Social Science Model Curriculum Standards are described in Appendix A (Related Activities). Listed below are some ways in which this unit directly supports the Model Curriculum Standards.

United States History and Geography

Standard 1: "A course should enable students to understand the chronological flow of events, the dynamics of change, and the critical links between past and present." Lessons one and two of this unit will help students consider historical events critically and to develop a sense of chronological succession. The emphasis on technological advancement (lesson one) and on the evolution of war strategies and conventions (lesson two) will help students understand the dynamics of change.
Standard 8: "A course should help students evaluate the causes and effects of American military involvements." The first and third lessons consider to some extent the causes and effects of specific US military involvements.

Standard 21: "A course should focus on the expansion and growing importance of the media in American life." The third lesson of this unit will help students understand the extent to which media coverage can influence not only public awareness and sentiment but also events.

Standard 22: "A course should devote attention to the role of the United States in the technology and politics of the nuclear age." Lessons one and three of this unit look to some extent at US foreign policy in the nuclear age.

Standard 37: "A course should provide opportunities for students to develop basic, creative and critical thinking, and interpersonal or social participation skills." All lessons of this unit will expose students to qualitative analyses and activities that promote creative and critical thinking.

World History, Culture and Geography

Standard 1: "A course should enable students to understand the chronological flow of events, the dynamics of change, and the critical links between past and present. The emphasis on chronology should not result in an endless chronicle of dates, names, and events, but rather in the opportunity to appreciate the significance of time, sequence, and the relationships that these create." Lessons one and two of this unit will help students consider historical events critically and to develop a sense of chronological succession. The emphasis on technological advancement (lesson one) and on the evolution of war strategies and conventions (lesson two) will help students understand the dynamics of change.

Standard 2: "A course should be worldwide in scope . . ." The case studies included in lesson one come from a variety of world regions.

Standard 3: "A course should give special emphasis to the role of Western civilization in order that students gain a greater awareness of (a) the global political, military, and economic dominance of the West in the past two centuries; (b) connections between contemporary American society and the development of Western civilization; and (c) an enduring appreciation of Western political and cultural achievements. The course should strive, however, to present the history of the West in a world context, stressing the developing interrelations between Western societies and other peoples. Western history and world history are not synonymous." Lesson one contains a number of case studies on Western history and lessons one and three include case studies on Asian history.

Standard 8: "A course should include the characteristics of the fundamental types of human society: gathering and hunting, horticultural, pastoral, agricultural, and industrial. It should demonstrate how these basic forms of organization differ from one another even as they satisfy similar and essential human, social, economic, political, cultural, and spiritual needs." Lesson one of this curriculum unit contains case studies of a variety of types of human society.

Standard 9: "A course should introduce students to the principal teachings and practices of the major world religions, primarily Christianity (both Western and Orthodox) . . . , Buddhism, Confucianism, Islam, Judaism, and Hinduism. It should show how religious and moral teachings have been used historically to validate prevailing political and social orders as well as to provide ideologies for protest and revolt . . ." Lessons one and two describe the religious justification used during certain wars.

Standard 11: "A course should define many of the varieties of government and political order in the world. In particular, it should make students familiar with such terms as: . . . city-state, . . . democracy, dictatorship, . . . empire, feudalism, . . . nation, nationalism, oligarchy, . . . sovereignty, state, . . . and tribe." Lesson one of this curriculum unit contains case studies which introduce these terms.

Standard 12: "A course should indicate the varieties of social order in historical contexts . . . Students should understand such terms as aristocracy, . . . class, elite, ethnic group, . . . nobility, . . . serfdom, and slavery . . ." Lesson one of this curriculum unit contains case studies which introduce these terms.

Standard 14: "A course should include consideration of scientific, technological, and philosophical innovations. Here students need to be aware of various examples of the effects of inventions, discoveries, and new thought on the exercise of power in human history . . ." Such innovations are emphasized in all lessons of this curriculum unit.

Standard 17: "A course should indicate the role of cultural perspectives, such as ethnocentrism, xenophobia, and racism, in the historical development of interrelationships among peoples and cultures . . ." This topic is introduced in some of the case studies of lesson one.

Standard 19: "A course should treat the various and changing definitions of human freedom in order to create a background for the appreciation of modern democratic values in comparison to other political ideologies, including totalitarianism and dictatorships." These ideologies are introduced in some of the case studies of lesson one.

Standard 20: "A course should provide some understanding of different ideas about change. Concepts such as decline, progress, diffusion, cyclical alternation, and revolutionary advance should be considered . . ." The concept of change is introduced throughout this curriculum unit, especially in lesson one.

Standard 21: "A course should provide opportunities for students to develop basic, creative and critical thinking, and interpersonal or social participation skills . . ." All lessons of this unit will expose students to qualitative analyses and activities that promote creative and critical thinking.

Standard 22: "A course should give ample attention to the importance of individual leadership, creativity, and genius or political power in shaping the development of mankind . . ." A number of the case studies in lesson one of this curriculum unit introduce influential individuals.

Physical Science Model Curriculum Standards

Adaptations of this curriculum unit to meet the Physical Science Model Curriculum Standards are described in Appendix A (Related Activities).

Listed below are some ways in which this unit directly supports the Model Curriculum Standards.

Standard 9: "Students understand forces and their effects upon matter." Lesson one provides an opportunity to discuss the effects of weapons upon their targets.

Standard 11: "Students understand mechanics, including the interrelationships of force, mass, distance, and time." Lesson one will expose students to the technological advancements of weapons, using some of these criteria.

Standard 12: "Students understand that motion is a movement of an object from one place to another . . ." Lesson one asks students to consider the motion of weapons towards their targets.

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"Why War?" Norman Abramowitz, in Teaching Youth About Conflict and War, edited by William A. Nesbitt et al, National Council for the Social Studies, 1973. Washington, D.C.

Other Related Classroom Materials

Most of the following materials are described fully in the Bibliography of Nuclear Age Educational Resources (third edition, 1988) distributed by the International Security and Arms Control Project. The items below focus on weapons, war, just war theories, and war crimes. See also the list of simulations in Appendix A.

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The Air War in the Pacific: Victory in the Air, Trevor Nevitt Dupuy, 1964. Franklin Watts, New York City, NY.

The American Military: Opposing Viewpoints, edited by David Bender, 1983. Greenhaven Press, St. Paul, MN.

The Anatomy of Conflict, Robin Riddle, et al, Stanford Program on International and Cross-Cultural Education, 1987. Stanford, CA.

"The Arming of the Earth," A Walk Through the 20th Century. Bill Moyers narrates this program available from PBS Video.

Arms and Armor, Frederick Wilkinson, 1984. Franklin Watts, New York City, NY.

The Atom Bomb, David Killingray, 1980. Greenhaven Press, St. Paul, MN.

The Atomic Bomb, Joan Solomon, 1983. Science in a Social Science Context Project, Basil Blackwell, London, England.

"Chemical Warfare: Ideas in Conflict," Editorial Forum, 1983. GEM Publications, Hudson, WI.

Choices in International Conflict, Robin-Riddle, et al, Stanford Program on International and Cross-Cultural Education, 1988. Stanford, CA.

"Citizen Responsibility, Conscience, War and the Draft," edited by Robert Pickus and Helen Garvey, 1980. World Without War Council of Northern California, Berkeley, CA.

Civil Defense in the Nuclear Age, Elaine K. Andrews, 1985. Franklin Watts, New York City, NY.

Combat Aircraft, Charles Messenger, 1984. Franklin Watts, New York City, NY.

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"The Decision to Drop the Bomb," Zenger Productions.

"Energy from the Atom," Patricia L. Smith, 1985. American Nuclear Society, La Grange Park, IL.

The Harnessed Atom, U.S. Department of Energy, 1986. Oak Ridge, TN.

"Heroism," second edition, Peace Education Project, 1982. Peace Pledge Union, London, England.

Hiroshima, Martin McPhillips, 1985. Silver Burdett, Lexington, MA.

Hiroshima: A Study in Science, Politics and the Ethics of War," Jonathan Harris, 1970. Addison-Wesley Publishing Company, Menlo Park, CA.

Hiroshima and Nagasaki, Jane Claypool, 1984. Franklin Watts, New York City, NY.

The Individual and the State, Joline Bettendorf, Stanford Program on International and Cross-Cultural Education, 1989. Stanford, CA.

"International Law," Bill of Rights in Action, Constitutional Rights Foundation. Los Angeles, CA.

"John Hersey's Hiroshima: a Study Guide," Richard Elias, 1984. Bantam Books, New York City, NY.

The Limits of War: National Policy and World Conscience, Donald Oliver and Fred Newman, American Education Publications, 1970.

Literature of War and Peace, International Security and Arms Control Project of the Stanford Program on International and Cross-Cultural Education, 1987. Stanford, CA.

Section 1: "..what are they running from, and to, and why."
Section 2: Survival and Afterward.
Section 3: Why War?
Section 4: "A man's bound to fight for what he believes in."
Section 5: The Individual and the State.

Militarism and Hope, Alyson Huntly, et al, 1983. William C. Brown Company Publishers, Dubuque, IA.

Missiles and Artillery, Ian Hogg, 1985. Franklin Watts, New York City, NY.

Modern Warfare: Weapons, Strategies, Effects, Tressell Publications, 1985. Brighton, England.

"Morality and Nuclear Arms: Debating the Issue," Editorial Forum, GEM Publications, 1983. Hudson, WI.

My Lai: moral, legal, and psychological questions, The Viet Nam Curriculum Project. Buffalo, NY.

"Nuclear Weapons and Warfare Collection," Adam Suddaby, 1982. Longman Resources Group, York, England.

"Peace and War," Peace Education Project, 1987. Peace Pledge Union, London, England.

"Space Weapons and Nuclear War: Ideas in Conflict," Editorial Forum, 1983. GEM Publications, Hudson, WI.

Submarines, Richard Humble, 1985. Franklin Watts, New York City, NY.

Surface Warships, Robert Van Tol, 1985. Franklin Watts, New York City, NY.

Survival and Afterward, Joline Bettendorf, Stanford Program on International and Cross-Cultural Education, 1987. Stanford, CA.

War, a filmstrip by Gwen Dyer.

War and Human Nature: Opposing Viewpoints, edited by David Bender and Bruno Leone, 1982. Greenhaven Press, St. Paul, MN.

War Crimes, a filmstrip and booklet by Marshall Windmiller, Ph.D., Zenger Productions, Inc., 1972.

War: Images of America, a filmstrip, cassette, and teacher's guide by Chevron School Broadcast, 1983.

War, Morality, and the Military Profession, second edition, edited by Malham M. Wakin, 1986. Westview Press, Boulder, CO.

Wars and Weapons, second edition, National Army Museum, 1982. Franklin Watts, New York City, NY.

"...what they are running from, and to, and why", Joline Bettendorf, Stanford Program on International and Cross-Cultural Education, 1987. Stanford, CA.

"Who Shares the Guilt?," Time, April 12, 1971, pp. 13-21.

Why War?, Joline Bettendorf, Stanford Program on International and Cross-Cultural Education, 1989. Stanford, CA.

World Order, Byron G. Massalas and Jack Zevin, 1970. Rand McNally & Company, Chicago, IL.

Educational Philosophy

The Evolution of the Methods and Rules of War is part of a series of units being developed by the International Security and Arms Control Project of the Stanford Program on International and Cross-Cultural Education. After a September 1984 review of available curricula for elementary and secondary teachers in the international security and conflict field, the project discovered a need for classroom materials with more balance, a wider range of perspectives, and greater use of critical thinking skills. (These findings were confirmed in a January 1987 review.) Other needs include materials which meet teachers' goals for greater flexibility of use, shorter time frames, and sensitivity in the treatment of controversial issues.

Curriculum Development. Teachers and international security experts were recruited to assist the Project in determining what the key issues are in this field and in outlining a strategy to insure that the qualities listed above are evident in each new unit. Ten key social studies-related topics were identified; these topics were further grouped into four clusters. The plan was to develop a three- to six-day social studies curriculum unit on each of the topics.

This topical approach was selected as it maintains flexibility for the teachers. Each of the units is designed to stand alone. A teacher who doesn't have the luxury of a separate course on international security issues or even several weeks to use the entire set of units could insert one or more of the units into an existing course when appropriate. (Some suggestions of when the units may be integrated among themes or events covered in standard textbooks are an element of each unit.)

Each cluster has its own context-setting lesson which briefly covers material in the earlier cluster. By utilizing these context-setting lessons, a teacher who skips around the topical outline or doesn't use all of the units can maintain continuity for the class. Of course, the ideal situation would be for an educator to teach all of the units in order as they are logically organized from examining the most basic concepts and facts to analyzing contemporary events.

Some of the titles currently under development or already published include:

The Anatomy of Conflict
Choices in International Conflict
The Evolution of the Methods and Rules of War
Major Concepts/Events in US-Soviet Relations: From the Origins to Recognition
Major Concepts/Events in US-Soviet Relations: 1945 to the Late 1980s

While all of the materials being developed from this outline are designed for use primarily in social studies classrooms, many of the units are applicable to science and literature classrooms. (Other curriculum units primarily for literature classrooms are being developed as well as social studies units on current events.)

Educational Philosophy. The ISAAC Project believes it is appropriate for the project to hold opinions about educational issues, particularly since topics covered within international security education can be controversial. As the project believes it is inappropriate for an educational organization to take stands on political issues, it has not advocated any political viewpoint in its curricula. (Advocacy in the classroom is not education--it is indoctrination.) The project's educational convictions are described below.

- Balance and Multiple Perspectives: The project believes that balanced instruction is a realistic and desirable goal. Balanced instruction has two major elements: first, determining what viewpoints exist on a topic and which should be presented, and second, presenting those views. On a given subject, many people are aware of only one or two viewpoints whereas many more may actually exist. Although it is the project's goal that teachers go out of their way to seek as many viewpoints as there are on an issue, the project recognizes that this is difficult because the media usually concentrates on the "major" views, and organizational resources in many areas may lack diversity.

  In determining what view to present in a classroom, the ISAAC Project encourages teachers to present a continuum of views, not to polarize stands in pro/con format, which tends to oversimplify the debate. Complexity should not be routinely avoided.

  The second element, balanced presentation, relies on the conclusions of the initial fact-finding element. Here again, the project encourages the presentation of multiple perspectives on an issue. Beyond this, such presentation should be equally fair and thorough on all perspectives. Perspectives should be introduced and analyzed without teacher advocacy. The project recognizes that many teachers believe stating their own viewpoint to the classroom to be essential; it asks these teachers to provide ample opportunity for student or other teacher viewpoints to be heard so that one advocacy position is not presented to the exclusion of others. Balanced presentation of historical and contemporary issues is an integral part of citizenship education.

- Critical and Creative Thinking: Given that achieving this goal of balanced instruction will ensure the utilization of a framework for comparing conflicting ideas and competing ideologies, it is essential that classroom materials encourage the development and expansion of students' critical and creative thinking skills so that they may compare, analyze, and evaluate multiple perspectives. After identifying values and assumptions of particular perspectives, students must learn how to seek further information and analyze this information. Students should be encouraged to take and defend positions on historical and contemporary issues. If students are to become responsible citizens, they must be able to define a problem or issue, judge relevant information, and draw connections and conclusions, and solve problems. The ISAAC Project has developed multi-modal, non-lecture-based activities which will enhance students' abilities to think analytically about complex issues, distinguish fact from opinion, and recognize bias and propaganda.

- Historical and Geographic Context: In analyzing the issues of international security, students must be provided with a historical and geographic context. Such context-setting will contribute to the identification of key actors involved in a contemporary issue; some actions the actors might undertake and their likely consequences; the differing values, assumptions, and perceptions which seem to motivate the acts; and ways the issue affects or is affected by other issues.
- Age-Appropriateness: Topics within international security and conflict education are not appropriate for all levels. Teachers must determine what materials are appropriate for their own classes. Each of the ISAAC Project units is developed and tested for grade levels at which the content is appropriate and pre-requisite knowledge is met by students.
- Values and Ethical Issues: The study of these topics inevitably raises ethical or value-related issues. In the project's materials, specific value positions have not been endorsed. Nevertheless, some would judge the decision even to teach these issues a value choice. What is crucial from the project's perspective is the context and process in which such issues are discussed. Teachers face the difficult task of encouraging the kind of free expression which is at the core of our democratic values while at the same time meeting the norms of sound educational practice, including political balance. The project encourages teachers embarking on the study of these issues to engage in a dialogue within the educational and larger community about the ethical and value questions raised in teaching these topics.
- Other Features: Whenever possible, ISAAC curricula include interactive, student-centered activities (such as debates, simulations, role plays, group discussions, dramatic presentations, and cooperative group projects); primary source materials; and use visuals. Materials have a high degree of respect for teachers and students and set high aims for student outcomes.
- Curriculum Testing and Review: In order to ensure that ISAAC Project curricula contain and emphasize these elements of sound education, the project submits its materials for rigorous pilot-testing by elementary and secondary teachers not directly involved in a unit's development, and for review by faculty members at Stanford University. If an issue analyzed in a unit is particularly controversial, the review process is expanded to

include educational leaders, scholars, and political leaders nationwide. Revisions to the units are based upon pilot-testing results and reviews.

It is the teacher's responsibility and privilege to use the curricula wisely and with sound educational goals in mind. Of course teachers know best their classrooms' dynamics and may adapt ISAAC materials as necessary; the project asks that these teachers keep in mind our project's educational philosophy. The ISAAC Project hopes that these materials will be useful in providing students experiences to learn and think about integral issues in the international security and conflict field. The project encourages comments from teachers who use the materials.

STANFORD PROGRAM ON INTERNATIONAL AND CROSS-CULTURAL EDUCATION

SPICE

Littlefield Center, Room 14, 300 Lasuen Street
Stanford University
Stanford, California 94305-5013
☎ (415) 723-1114

Background

The Stanford Program on International and Cross-Cultural Education (SPICE) represents a long-term effort by Stanford University to improve international and cross-cultural education in elementary and secondary schools. The program traces its origins to 1973 with the initiation of the Bay Area China Education Project, an effort to upgrade teaching about the People's Republic of China. Subsequently, parallel projects on Japan, Africa, Latin America, International Security and Arms Control, Western Europe, Eastern Europe and the Soviet Union were established, and together with the China Project, became the nucleus of SPICE. SPICE also offers services in the fields of geography and foreign language.

In 1979, SPICE joined with two other international resource organizations–The World Affairs Council of Northern California and Global Educators–to form the Bay Area Global Education Program (BAGEP), an international studies resource consortium serving K-12 schools and districts in the San Francisco area. In 1986, Stanford University, in cooperation with the World Affairs Council and Global Educators, was selected to manage the California International Studies Project (CISP), a legislatively-based (AB 2543) statewide network of international resource centers for which BAGEP serves as a model. SPICE is the curriculum development and materials resource arm of CISP.

Sponsorship

SPICE is sponsored by the Institute for International Studies and the School of Education at Stanford University.

Sources of Support

SPICE receives support from federal sources, private foundations, and the Institute for International Studies.

Current Programs and Priorities

SPICE's current curricular priority is the development of lessons which enhance the study of world history, cultures and geography. In the area of staff development, SPICE's priority is to provide support for the programs of the CISP Resource Centers. SPICE also has ongoing staff development efforts through each of its individual projects, and is centrally involved in a summer institute on the Stanford campus in conjunction with BAGEP.

Within the range of its existing project, SPICE will provide consultation in the development of international studies programs for elementary and secondary education on a fee for service basis.

Major Emphases

SPICE emphasizes curriculum and staff development and offers a wide variety of teaching materials and staff development programs. SPICE has strong interests in the development of university-based international studies centers, and program evaluation.

Publication of Teaching Materials

SPICE offers over 60 titles which include curriculum units, resource guides, and research reports. Write to SPICE for a free catalogue.